THE BRICKBUILDER

VOLUME XVII APRIL 1908 NUMBER 4

PUBLISHED MONTHLY BY ROGERS & MANSON

85 Water Street - - - Boston, Massachusetts

Entered at the Boston, Mass., Post Office as Second-Class Mail Matter, March 12, 1892.

Copyright, 1908, by ROGERS & MANSON

Subscription price, mailed flat to subscribers in the United States, Insular Possessions and Cuba	$5.00 per year
Single numbers	50 cents
Subscription price, mailed flat to subscribers in Canada	$5.50 per year
To Foreign Countries in the Postal Union	$6.00 per year

SUBSCRIPTIONS PAYABLE IN ADVANCE

For sale by all news dealers in the United States and Canada. Trade supplied by the American News Company and its branches.

ADVERTISING

Advertisers are classified and arranged in the following order:

	PAGE		PAGE
Agencies — Clay Products	II	Brick Enameled	III and IV
Architectural Faience	II	Brick Waterproofing	IV
" Terra Cotta	II and III	Fireproofing	IV
Brick	III	Roofing Tile	IV

Advertisements will be printed on cover pages only

CONTENTS

PLATE ILLUSTRATIONS

FROM WORK BY

WILLIAM MARTIN AIKEN AND ARNOLD W. BRUNNER, ASSOCIATED; A. S. BELL; WILLIAM A. BORING; DELANO & ALDRICH; HERBERT D. HALE; PARKER, THOMAS & RICE; CHARLES BRUEN PERKINS; JAMES GAMBLE ROGERS; SHEPLEY, RUTAN & COOLIDGE; WOOD, DONN & DEMING.

LETTERPRESS

		PAGE
SOUTH PORTAL, CHURCH OF ST. STEPHAN, TANGERMUNDE, GERMANY	Frontispiece	
THE AMERICAN THEATER — V	*Clarence H. Blackall*	67
THE PUBLIC BATH — III	*Harold Werner and August P. Windolph*	70
ARRANGEMENT OF PHOTOGRAPHS AND MAGAZINE PLATES	*Sidney F. Kimball*	79
THE USE OF HOLLOW TILE TERRA COTTA BLOCKS	*Illustrations*	83, 84
EDITORIAL COMMENT AND SELECTED MISCELLANY		85

SOUTH PORTAL, CHURCH OF ST. STEPHAN, TANGERMUNDE, GERMANY.

THE BRICKBVILDER

VOL. 17 NO. 4 DEVOTED·TO·THE·INTERESTS·OF·ARCHITECTVRE·IN MATERIALS·OF·CLAY· APRIL 1908

V

The American Theater—V.

HEATING AND VENTILATION.

BY CLARENCE H. BLACKALL.

THERE are two theories accepted by engineers in regard to the heating and ventilating of a hall of audience. One starts with the assumption that the fresh air should be introduced into a hall either through the ceiling or on the side walls at a considerable height above the floor, this air, when cooling, becoming heavier and hence dropping to the floor level, whence it should be drawn off by exhaust ducts, either in the floor itself or in the base at the floor line. This theory further asserts that the air near the floor, always being colder than the air at a higher level, must necessarily be drawn out, in order to keep the lower part of the hall comfortably warm. The second theory starts on the assumption that the emanations from a crowd of people, from electric and gas lights, are always highly heated in relation to the incoming air, and would, therefore, naturally ascend to the top of the ceiling, whence they should be drawn off at once, in order to preserve the purity of the air of the hall. In this system, it follows that the fresh air is introduced at the floor level, and the exhaust is entirely at the top. The first theory disregards the heated emanations from the human body, drawing these downward along with the fresh air, and thus compelling the spectator to breathe the mixture, in order to get any fresh air at all. The second system gets rid of the contam inated air at once, at the expense of carrying along with it a considerable amount of fresh air entering from below.

The first solution is essentially academic; the second is essentially practical. The best evidence in the world that the air in the top of the room is always the foulest is afforded by one's nose, and no amount of theory can disguise the fact that even under the best circumstances, the air is apt to be worse in the gallery than on the ground floor. There is never any difficulty in heating an audience room as far as mere temperature is concerned. The difficulty is always to get rid of impurities quickly and without causing drafts. By the overhead introduction system, if enough air is brought in, and the inlets are distributed sufficiently over the entire ceiling, the air of the entire hall can undoubtedly be changed completely so as to insure a suitable supply of fairly fresh air to every spectator, but this is accomplished at a large expense, with a loss of efficiency, and it is extremely difficult with this system to avoid drafts. There is a good example of this system in one of the most prominent halls in this country, the heating and ventilation of which was designed by and carried out under the supervi sion of one of the most eminent New York engineers. The air is taken in at the top of the hall, and drawn out through registers in the floor of the parquet, the motion of the air being forced by an inlet and an outlet fan. The installation was a very expensive one in first cost, and proved expensive in maintenance. From the very opening of the hall complaints were made of drafts. To remedy this, more than half the ceiling registers were closed, the speed of the fan was cut down one-half, and finally half of the plates of the inlet fan were removed, but even then there were found to be drafts and the ventilation was far from perfect. It is the belief of the writer, based upon the most careful examination of existing halls in this country and abroad, that the downward system of heating and ventilation is seldom wholly satisfactory and is often absolutely impractical when applied to a large hall, entailing unnecessary expense, and being most uncertain in operation. The other system has been almost invariably found to work satisfactorily under varying conditions, to give uniformity of temperature, with ample change of air, and to require little care when properly installed and automatically controlled.

The building laws of several of our large cities prescribe a minimum supply per minute of twenty-five cubic feet of fresh air for each person accommodated in a hall of audience. For an overhead system this might be even insufficient, but for a properly arranged natural system, with supply below and exhaust above, this has been found in practice to be altogether too much. With a proper arrangement of the plant, ten cubic feet of air per person per minute is all that can safely be introduced into a hall and is sufficient to secure perfect heating and ventilation throughout. The writer has yet to find an installation actually supplying much more than this. When provision has been made for a greater supply the quantity is almost invariably cut down very materially in daily use. Ten feet per minute per person is full enough if it really is distributed so as to be available for each person, while a hall might be wretchedly ventilated which had a supply equal to twenty-five or even fifty feet per minute, if that supply were simply allowed to enter at one point and go out at another, without adequate distribution. Furthermore, no plant can be made perfect on paper. Air does not always go where it is sent even with a fan behind it, and even the most intel-

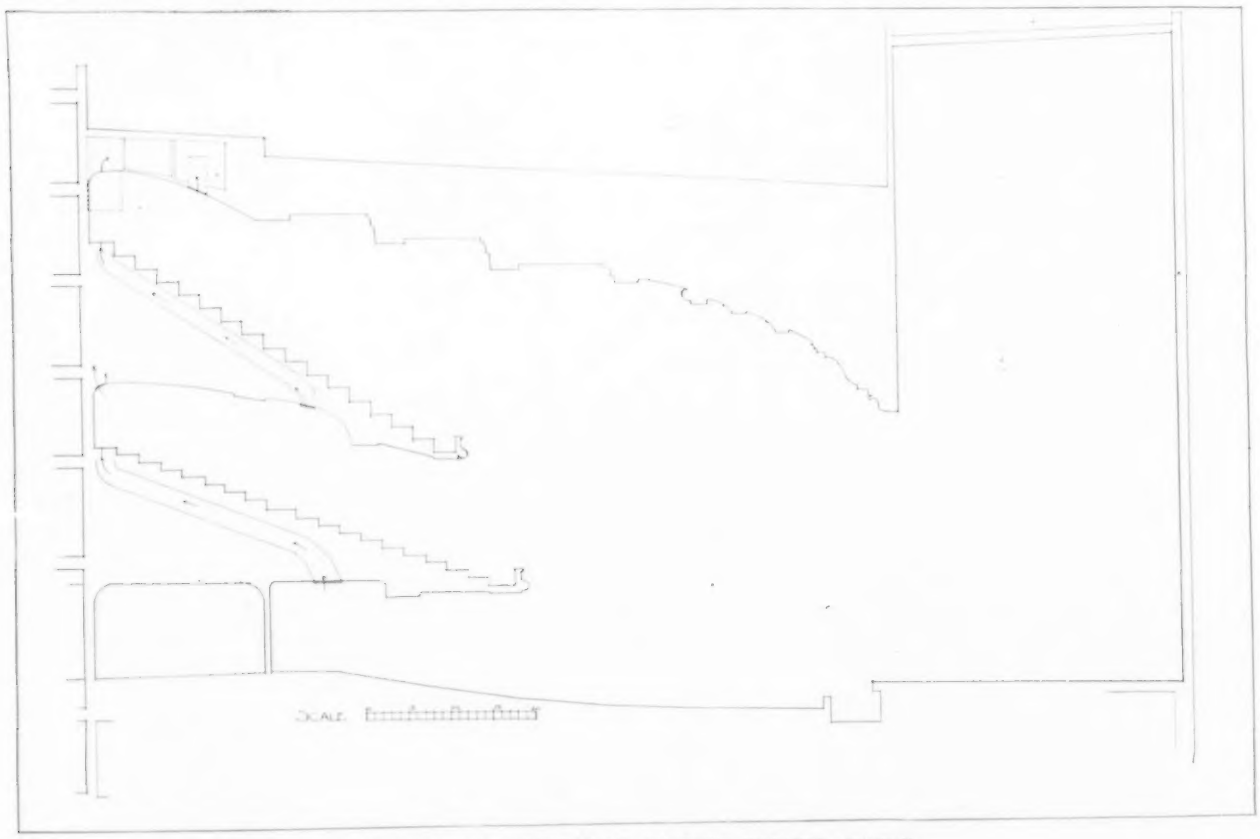
ligently devised system requires careful adjustment in operation, for the essential condition is uniformity of distribution, and anything like a by-pass of air currents or unequal velocities through the ducts is apt to make success impossible.

For the purpose of illustrating more specifically the upward system of ventilation, the Colonial Theater, in Boston, will be taken as an example. The air is introduced from out of doors into a basement chamber. Local conditions are such that no filtering or straining of the air was considered advisable. Beyond this entrance chamber the air is carried either through a series of steam-heating pipes or around the same by suitable by-pass, to a fan chamber, whence the air is forced into the space under the main orchestra, the whole of which is utilized as a distributing or plenum chamber. The air is introduced to this chamber through a single, large galvanized iron duct, but inside the wall the duct is split up into a number of smaller pipes so arranged that the air will surely be carried to all portions of the heating chamber under uniform pressure. A better practice would be to divide this space by brick partitions into not less than three sections, and better six, carrying separate air pipes to each section; these pipes being regulated by dampers, so that uniform pressure will be maintained in each chamber. The object, of course, is to make sure that the air will not take a by-pass, but that the warm air issuing into the audience room will enter everywhere with equal velocity.

The temperature of the air is controlled by thermostats placed in various portions of the auditorium, operating the steam supply to the coils beyond the fan, and also operating the by-pass valves. It has been found most satisfactory to introduce this air at a temperature of between sixty-five and seventy degrees, or about the temperature desired in the hall itself.

From the heating chamber, air escapes into the auditorium through openings in the floor connected to small chambers formed in the legs of the seats, each seat thus having a supply. This is a convenient way of masking the air inlets. Another practice is to carry a three-inch round pipe up under the center of the seat, capping it with a low, bell top, raised an inch or two above the floor. The results in either case are essentially the same.

It is not enough, however, to introduce air to the floor of the orchestra. From the fan room, pipes are carried to the space under the floor of the balcony. The air thence escapes through perforations in the faces of each of the risers of the balcony steps. The flow of air is regulated by dampers in the basement.



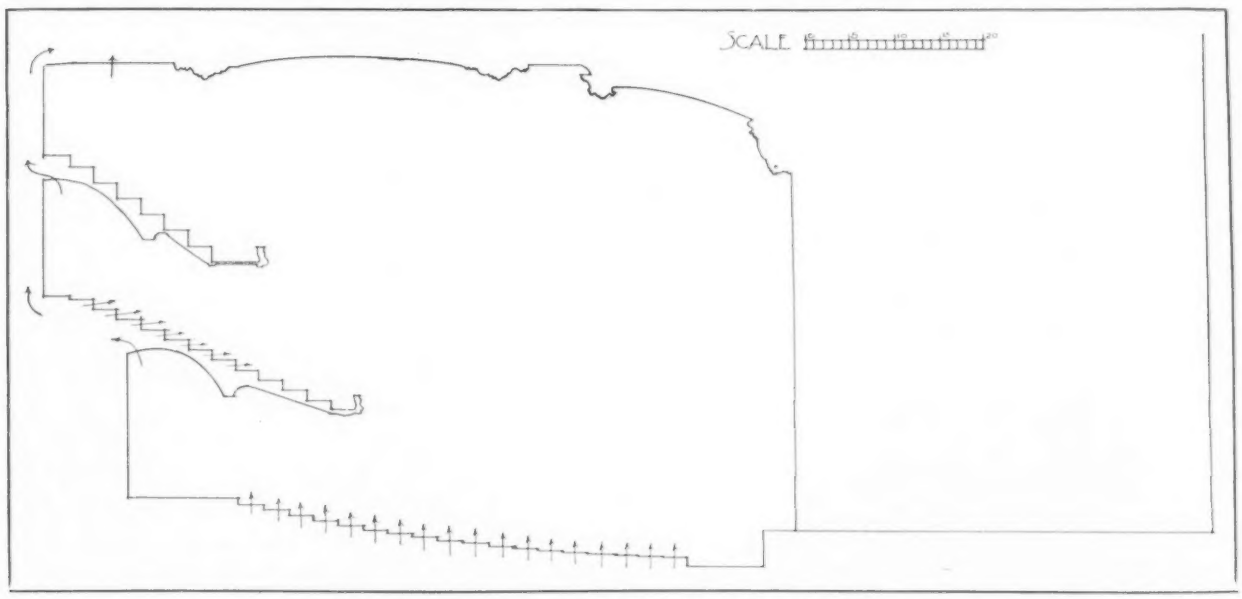
HEATING AND VENTILATION, MAJESTIC THEATER, BOSTON.

This constitutes the entire supply system for the auditorium. The total area of the supply ducts is proportioned on a rate of delivery through the outlets of not over five feet per second. For the exhaust, a row of outlets is arranged around the center of the ceiling, and also larger registers in the ceiling at each side and the center, over the rear of the gallery. All these openings connect directly into the air space immediately over the auditorium. To ventilate the pocket under the balcony, registers are introduced into the ceiling and exhaust pipes carried to the air space over the gallery. This

air space in turn is divided into cross sections by the lines of steel girders, and these sections are all connected at one end to an exhaust chamber from which a fan draws air and delivers it to a discharge duct carried above the roof.

The area of the exhaust registers in this case was made somewhat larger than the area of the inlets. It is believed that slightly better results could be obtained if the area of the outlet registers were smaller, by, say, five per cent, than the combined area of the inlets. It is well to maintain a slight plenum in an auditorium, thereby checking any tendency to drafts inward from the vestibule doors. Also in operation great care has to be taken to properly balance the speed of the two fans above and below, so that the draft of the up fan will be entirely from the heating chamber below, through the auditorium, and not draw on the foyers and corridors.

This system makes no provision for either washing or cooling the air, both of which are very desirable. At an



HEATING AND VENTILATION, COLONIAL THEATER, BOSTON.

expense of less than two thousand dollars an air washer can be installed outside of the main fan, which would give very satisfactory results. The least expensive way to cool the air is to keep the receiving tank of the air washer partially filled with ice, thereby using ice water to wash and consequently to cool the incoming air. When the expense is not an item, a more sure way is to use a refrigerating plant to pump cold brine through the pipes which are used in cold weather for the steam, but in the writer's practice the former method has been found the simplest and least expensive, while sufficiently effective. The cost of such cooling is approximately half the cost of heating the same quantity of air, or for an ordinary theater under ordinary conditions an average of ten dollars per performance.

The system described has been followed in principle in most of our American theaters where the space under the auditorium could be spared for a plenum chamber.

When properly handled and adjusted, thermostatically and otherwise, such a system can easily maintain the air throughout an entire auditorium at an even temperature not varying more than two degrees anywhere.

Very often, however, the space under the parquet is claimed for dressing-rooms or storage. The second illustration shows the heating and ventilation recently installed under such conditions. The radiation is proportioned on the basis of 1 foot of heating surface to 100 cubic feet of space to be heated. Fresh air is introduced through twelve direct indirect radiators in side walls aggregating 520 square feet, and through two indirect stacks in main floor, one each side on line of the first box, each of 1,200 square feet. There are also 770 square feet of direct radiation. Such a system would be intolerable without the most thorough ventilation, especially as the audiences in this particular house are not of the highest type and may be allowed to smoke. In the ceiling over the standing-up space is a continuous exhaust register 3 feet wide by 48 feet long. Over the center of the balcony are three registers, each 16 by 36 inches, and over the back of the balcony pocket a continuous register 12 inches by 14 feet. In the main ceiling, over the gallery, is a continuous register, 18 inches wide by 40 feet long. All of these registers are connected to galvanized iron ducts and extended, separately as much as practicable, to a 110-inch exhaust fan above the roof. The steam supply is controlled thermostatically and the velocities of air in the exhaust regulated by adjustable dampers.

It has been found in practice that two spots in an auditorium are apt to be cold: one, the orchestra pit at each end of the stage apron, and the other just in advance of the lines of the boxes on each side. Consequently, at each of these points it is well to put a certain amount of direct radiation. The same result has been accomplished by locating exhaust ducts near the floor to draw off the cold air.

In the old days when electricity was unknown it was quite essential to have an enormous exhaust ventilator over the central chandelier and highly desirable to arrange a special vent in connection with each gas jet.

But the introduction of electric light has, of course, changed all that.

The stage itself is usually heated by lines of 1½-inch circulation pipes carried entirely around three sides of the stage as far as possible and starting not less than six feet above the stage level. The amount of this radiation is largely a matter of judgment and of exposure. The total surface, however, should be on a ratio of not less than 1 square foot to each 200 cubic feet of space over stage floor behind the curtain, and, in many cases, twice that quantity might be insufficient. A good rule is to put in all one can, and see that the mains and returns are large enough to double it. The scantily attired artists on the stage seldom complain of the heat.

The ventilation of dressing rooms is accomplished in various ways. If, as is unfortunately often the case, the rooms have no outside light and air, a fresh supply of warmed air must be pumped to them and they must be connected to a system of forced exhausts. If they have outside windows, the forced supply can be dispensed with, in which case the exhaust must be ample and positive. In any case the heating and ventilating of these rooms must operate independently of the auditorium, as the dressing-rooms are used a great deal when the house is unoccupied.

The heating and ventilating of other portions of a theater do not present any peculiar problems, other than are involved in heating and ventilating ordinary rooms or apartments. There are, of course, many variations from the system herein described, and each theater presents special problems which have to be studied and treated individually. The overhead system has never developed beyond the stage of interesting experiment. It can, of course, be made to work perfectly if space and first cost are not to be considered, but it requires such extreme care in planning, such discriminating exactness in adjustment, and piles up so large a coal bill in operation, that few owners will knowingly accept it.

The Public Bath—III.

THE AMERICAN TYPE.

BY HAROLD WERNER AND AUGUST P. WINDOLPH.

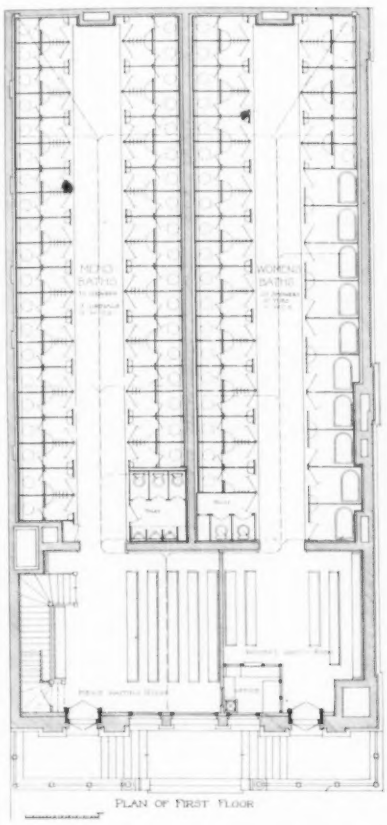
FROM 1850, the date of the introduction of the public bath in this country, and almost to the close of the century, but little attention was given to the subject of bath sanitation. Our American municipalities were either indifferent, or at any rate did not deem it imperative to establish a system of public baths. A few isolated buildings, of the river bath type, poor and crude imitations of European models, were in operation; also some primitive buildings equipped with shower baths.

To better appreciate the conditions at this time, some statistics taken in New York and Philadelphia are interesting. In the former city ninety-six per cent of the people of the tenement sections were entirely unprovided with bath facilities, and Philadelphia showed eighty-two per cent unprovided for; in one section containing two hundred and fifty-five thousand people only three hundred people had proper bathing facilities. The cities of the second class and towns were but little better off.

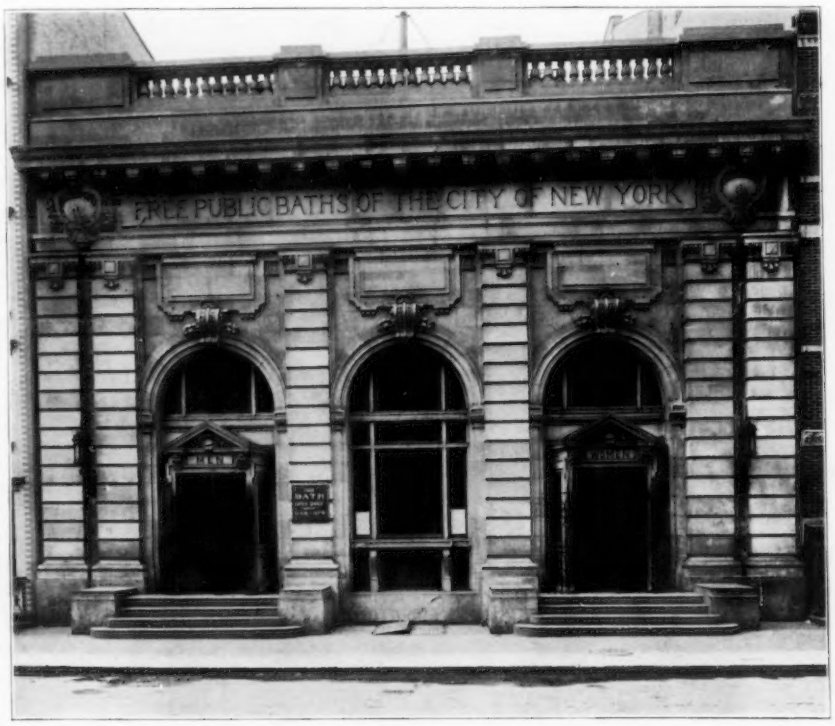
We have already noted that England had long before this by legislative enactment, made it mandatory to establish these buildings as an integral part of the modern social system. In the early nineties, in response to an awakening on the part of our American body politic, a movement resulted that may be described as a new social spirit, or civic renaissance. The state of New York, after considerable discussion, finally consented to give the bath movement legislative support, and to provide ways and means to furnish proper bathing facilities for the people.

It is within the last decade that bath building has shown some systematic development. Each municipality heretofore approached and solved the problem after its own fashion, some following inapplicable foreign types, but generally, and with more unsatisfactory results, the direction of an incompetent board of local improvement. No particular type has been agreed upon as being proper, even under similar local conditions. We find in the solving of this problem that lack of co-operation, which has been equally manifest in other matters of civic improvement in this country. This may be due, in a measure, to the complex character of our population, and to the size of

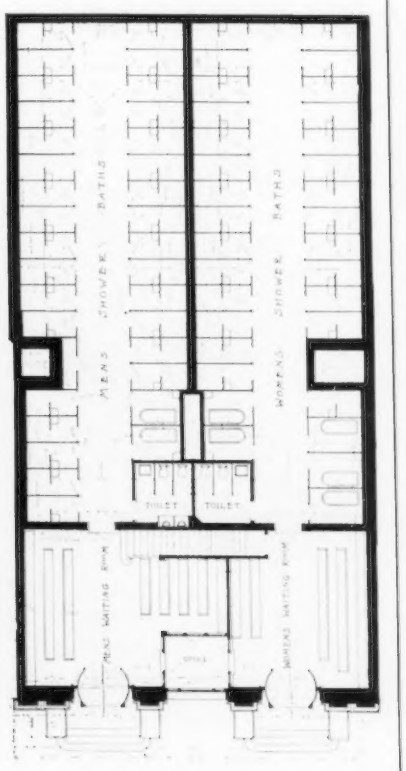
SWIMMING POOL, BROKAW HALL, PRINCETON UNIVERSITY.

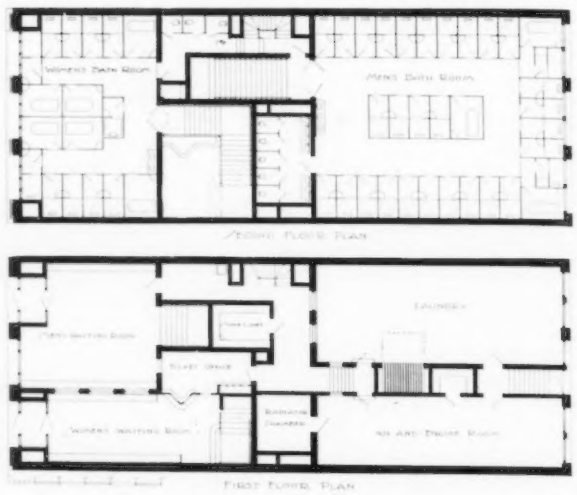


PUBLIC BATH, JOHN JAY PARK, NEW YORK. Stoughton & Stoughton, Architects.



PUBLIC BATH, EAST ELEVENTH STREET, NEW YORK. Arnold W. Brunner, Architect.





PUBLIC BATH, DOVER STREET, BOSTON.
Peabody & Stearns, Architects.

a country as vast as ours which is in a state of rapid development, but above all to the lack of systematic records and comprehensive statistical information on the subject of baths. This last factor has been of great assistance to Germany in developing a system of baths properly proportioned to the needs of her people. Foreign cities of the first class are often equipped with small bath buildings but in this country the size of the buildings indicates fairly accurately the size of the city. We have had the advantage of the experimenting on the part of foreign authorities and have profited by their mistakes, and while our bath system, even up to the present day, is in a very experimental and indeterminate shape, some of our individual buildings are, as regards sanitation and fittings, equal to the European models and are often superior in simplicity of plan and merit of construction.

It is well to bear in mind, however, that we have not the difficulties of providing facilities for various classes of bathers, and the elimination of steam, hot air and vapor baths has further simplified the problem. The elaborate entrance halls, staircases and rooms devoted to various purposes other than bathing, play a comparatively small part in the municipal bath establishments in this country, the desideratum being to provide the largest proportion possible of units devoted solely to bath purposes.

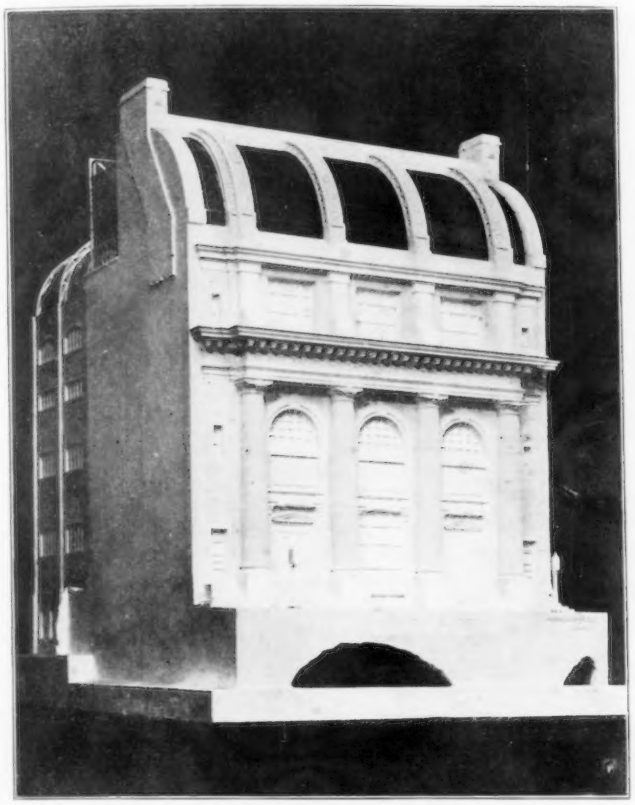
For convenience we may classify public baths into two main groups: the interior baths, including all that are enclosed, and which, as a rule, provide facilities for all year bathing, and a second group, including seashore and river baths and those open to the air.

We find three distinct types of interior baths: first, those equipped with the shower ; second, those equipped with the pool; and third, a type combining the other two.

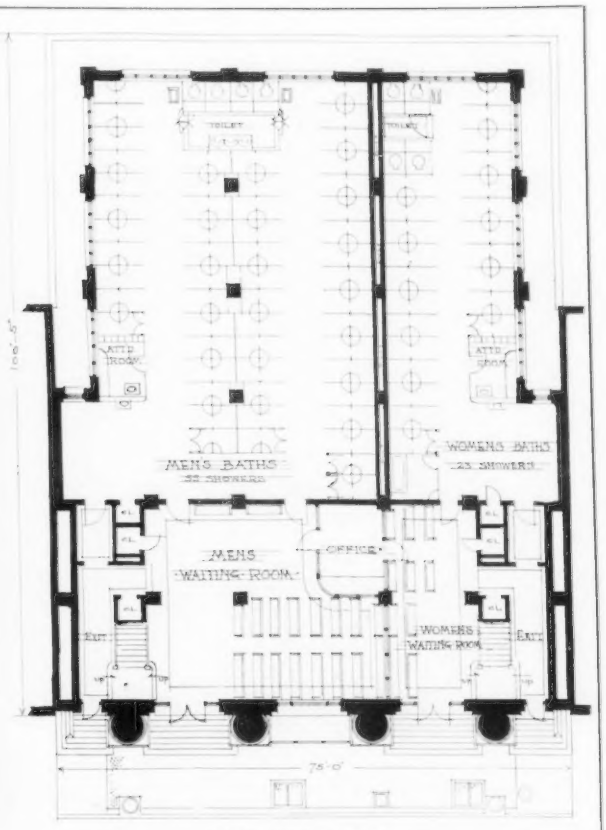
The building equipped with the shower has up to the present time been the most favored by our municipalities. Its many advantages of economy, practicability and simplicity have appealed to the authorities, and the majority of the cities of this country having public baths have, at least, one building of this type.

SWIMMING POOL, PUBLIC BATH, WEST TWENTY-THIRD STREET, NEW YORK.

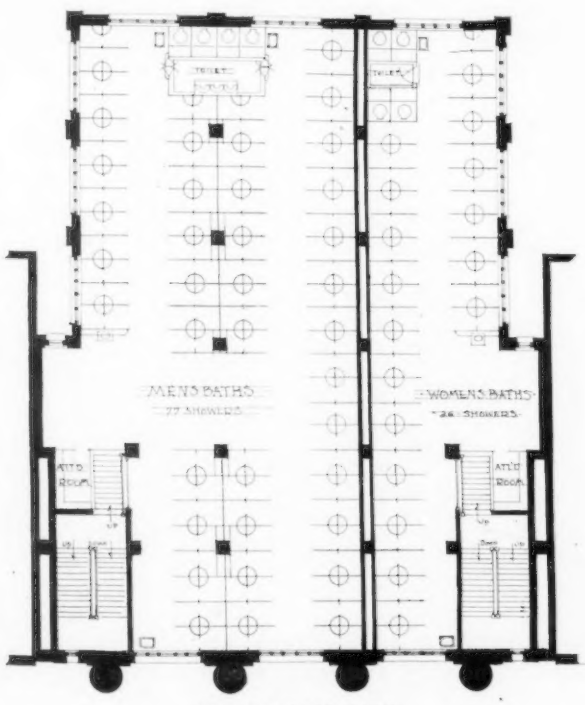
We have seen that the small city bath equipped with showers has been greatly favored by the German and other continental authorities. In cities of the first



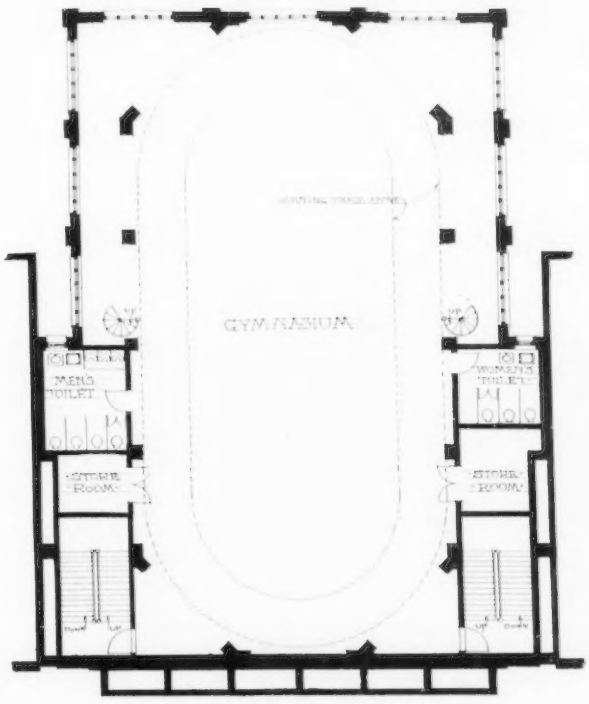
FROM PHOTOGRAPH OF MODEL.



FIRST FLOOR PLAN.



SECOND FLOOR PLAN.



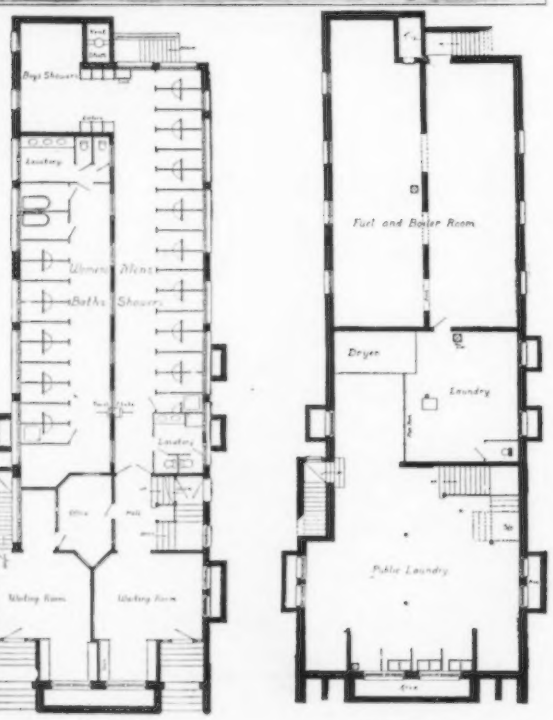
GYMNASIUM FLOOR PLAN.

PUBLIC BATH AND GYMNASIUM, EAST FIFTY-FOURTH STREET, NEW YORK.

WERNER & WINDOLPH, ARCHITECTS.

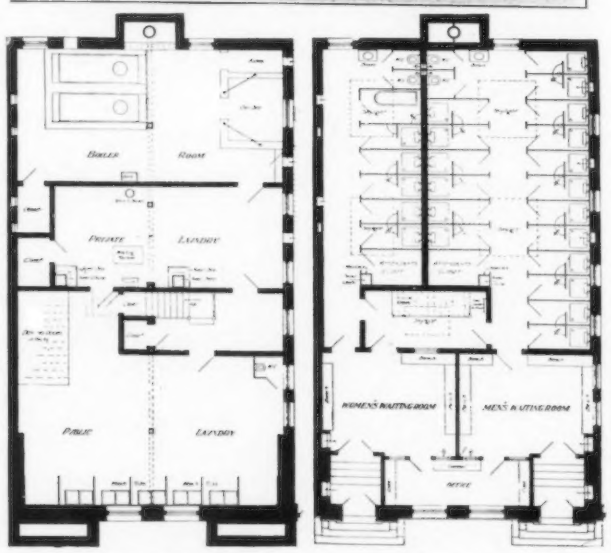
class the capacity of these buildings rarely exceeds fifty units; the larger buildings invariably combine other forms of baths with the showers. In this country some of our largest institutions are equipped solely with shower baths, with a capacity varying from seventy-five to two hundred units.

An excellent example of the modern shower type is the John Jay Park Public Bath of New York. The site is too near the river and the building being situated at the side and not in the heart of the district must be at a disadvantage in drawing its patronage; in fact, many of the New York baths are unfortunately situated in this respect. The building adjoins the park, however, and has the advantage of light and air on three sides. The comparatively small waiting rooms and large bathing hall space, with a total bathing capacity of one hundred and two shower compartments, are in marked contrast to foreign buildings of similar capacity, and show the strictly utilitarian purposes of the building. It has no



FIRST FLOOR. BASEMENT.

PUBLIC BATH, CLEVELAND.
E. H. Beier, Architect.



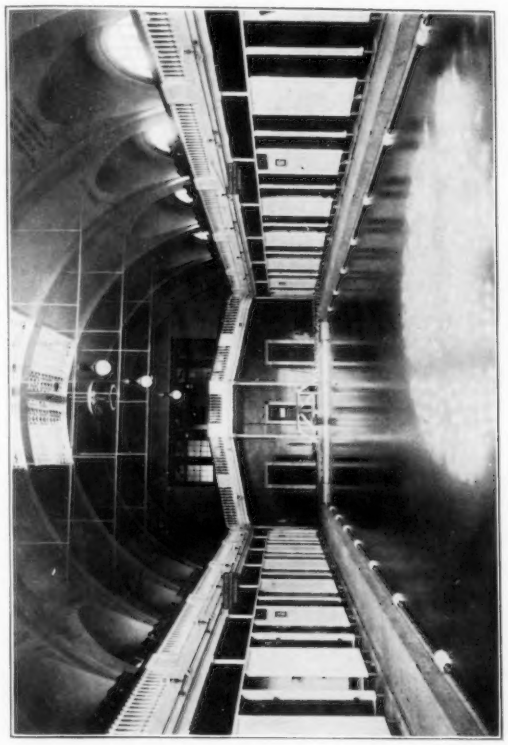
BASEMENT. FIRST FLOOR.

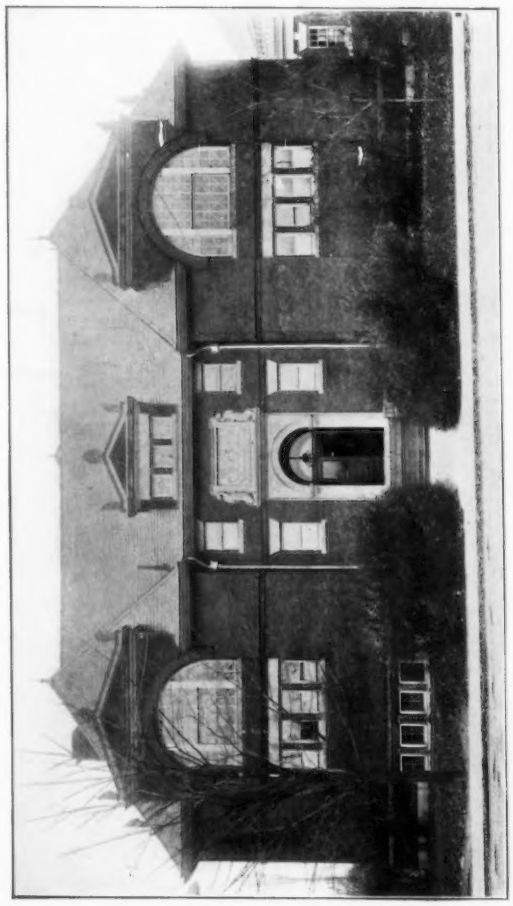
WALTERS PUBLIC BATH, BALTIMORE.

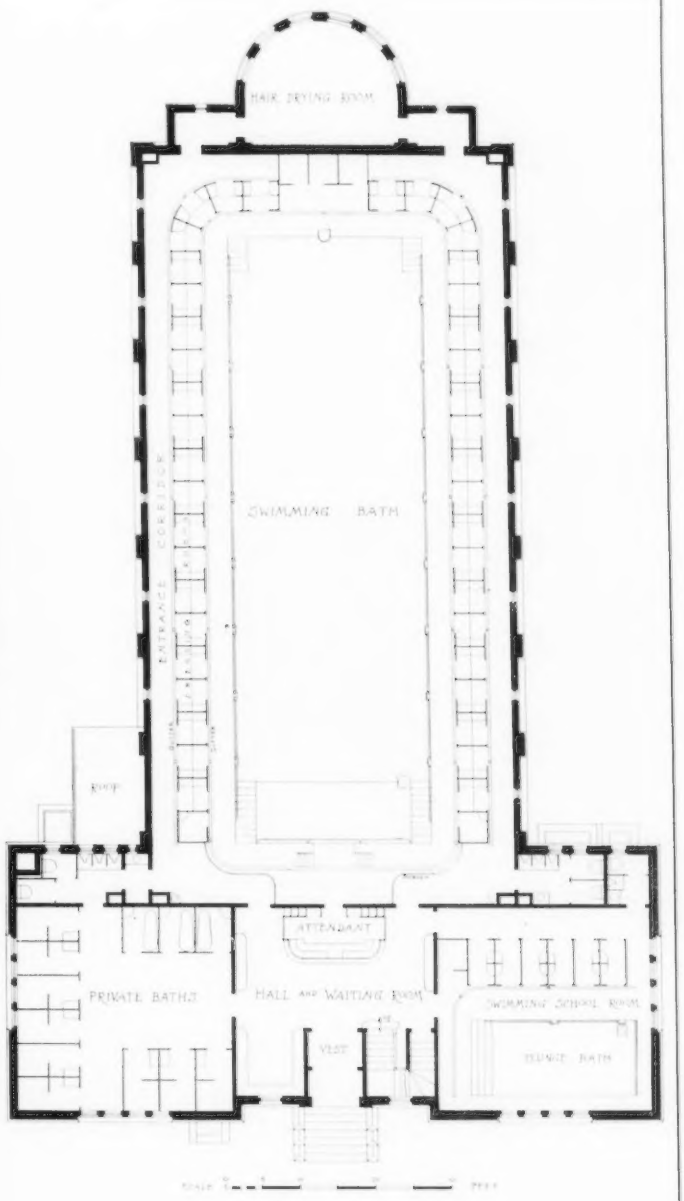
provision for a laundry, in fact none of the baths of New York are so equipped, although the Rivington Street Bath, the first municipal bath in New York, had installed a laundry which did not prove successful, and the allotted space has since been replaced by shower compartments. Some others of our cities have had indifferent results with the public laundry; on the other hand, in Baltimore, Buffalo, Cleveland and Boston, those baths which are equipped with laundries have had fairly successful results. In analyzing this matter the success or failure of this public facility does not seem to be a question either of locality, character of the patronage, or administration, — the exact cause as yet remains undetermined.

We do know that abroad, particularly in England, the laundry plays an important and successful part in bath economy: it is invariably prominently placed, well ventilated, and its many advantages have appealed to the public. We find in this country the laundry relegated to the basement in a restricted space and often directly adjoining the boiler room.

The Dover Street Bath, Boston, is another example of the shower type. The shower halls are elevated some ten feet above the waiting-room level to provide necessary light and air for the laundry. Steam for this bath is







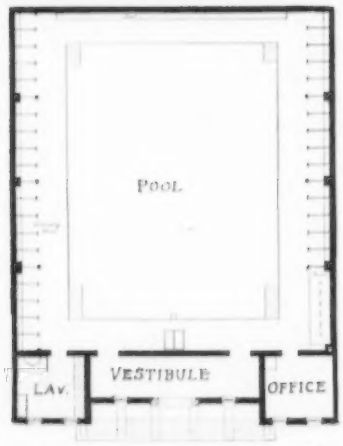
FIRST FLOOR PLAN

BROOKLINE PUBLIC BATH,

BROOKLINE, MASS.

F. JOSEPH UNTERSEE,

ARCHITECT.



PUBLIC BATH, PHILADELPHIA.

furnished from a fire department building in the neighborhood, an arrangement which has effected a considerable saving to the municipality.

The Buffalo Municipal Bath, situated in a tenement district of the city, illustrates a somewhat smaller city bath equipped with showers. A general waiting room for both sexes requires different times for bathing and considerably reduces the efficiency of the building, as no more than half of the bathing hall capacity can be utilized at one time.

The Walters Public Bath at Baltimore shows the shower halls properly proportioned at a ratio of three to one, but the waiting rooms are somewhat inconsiderately planned, allowing an equal area for both sexes. The building is equipped with a small public and private laundry in the basement.

In a similar type of small city bath at Cleveland we find the waiting rooms of equal capacity and the shower halls very nearly so. A corner location has allowed a special entrance to the laundry in the basement.

At the other end of the scale in respect to size, and as an example of the shower-bath type of large capacity, is the East 54th Street Public Bath, New York, now under construction. Two stories of shower halls and some showers in the gymnasium give a total of two hundred and eleven bath units, furnishing a working capacity of eight thousand baths a day. In order to facilitate the circulation of such a large number of bathers, it was considered advisable to provide special exit halls. The ratio of the bathing hall capacity for the sexes is about two and one-half to one. In designing this building the architects considered it preferable to provide for one hundred and thirty shower bath units and to substitute a pool bath for the shower baths omitted. The authorities, however, did not consider the pool necessary at the time, but now have the matter under consideration. The relative value of the pool and shower to the public bath building will be discussed in another chapter.

The second type of the interior bath, in which the pool alone serves the bathing purposes of the institution, is but rarely used in this country. The only instance where this system has been adopted throughout a large city is in Philadelphia, which has fifteen buildings so equipped. The baths are not of a strictly modern type and are comparatively inexpensive buildings, in most cases without proper heating plants.

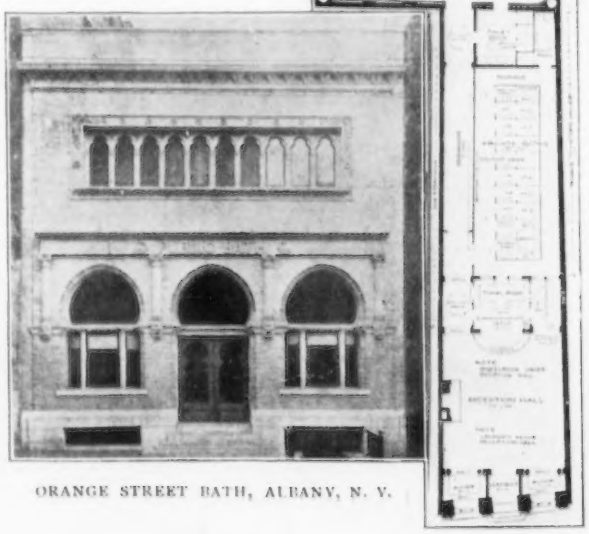
The plan of the pool is modeled after the English type with the dressing compartments directly off the pool runway; adjoining the waiting room is a primitive form of a preliminary cleansing bath arranged in an alcove.

The pools are fed from the Schuylkill River, which is an economical arrangement, but at certain seasons of the year, when the river holds considerable deposits in suspension, the pools are not particularly inviting, as the baths have no filters. In spite of these objections the baths have served their purposes well, as is amply proved by a yearly attendance of five million bathers.

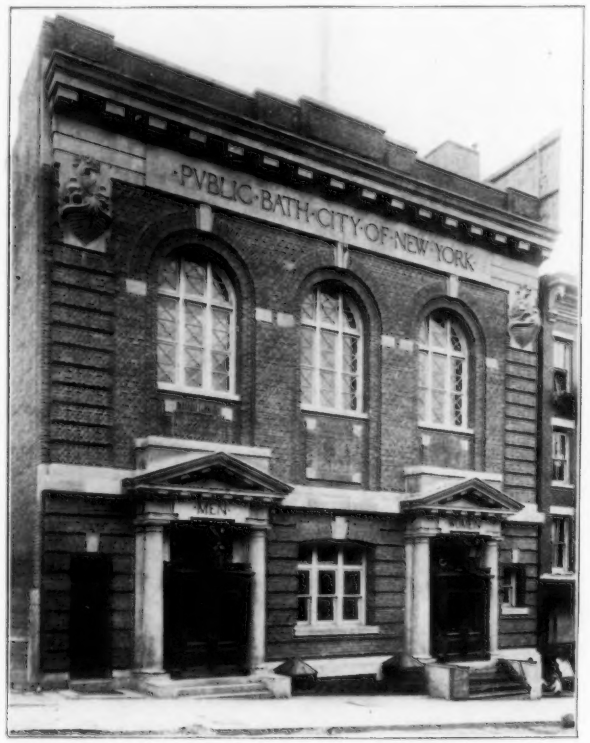
There are a few other isolated examples of the pool bath type which are similar in general plan and arrangement to the Philadelphia baths and call for no special comment.

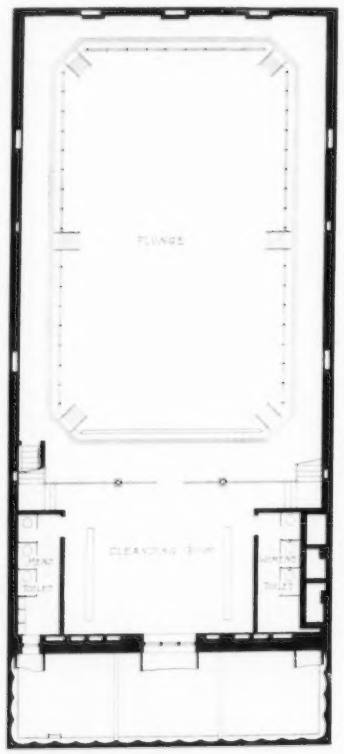
The third type, the combination of the pool and shower bath, is rapidly growing in favor in this country, and will, eventually, in the opinion of the writers, displace the other two forms, except in those instances where it is desirable to provide baths of very small capacity.

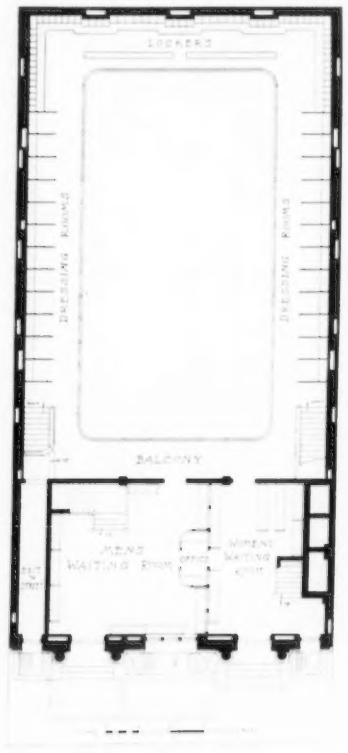
One of the earliest examples of this type in this country is the Municipal Bath at Brookline, Mass. This building closely follows foreign precedent and its similarity in general plan to the Quedlinburg Bath is very marked. The pool bath units as compared to the showers are proportionately much larger than in the German prototype, the pool bath providing more than eighty per cent of the capacity.

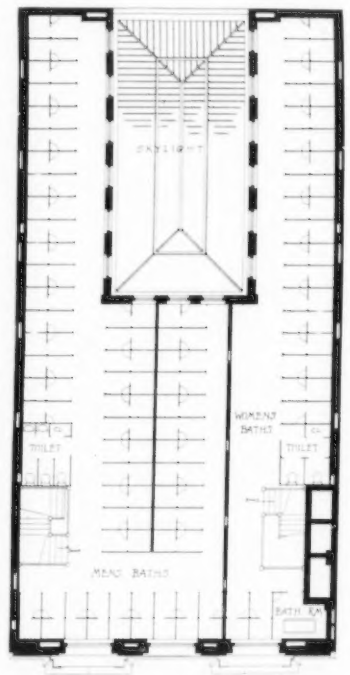


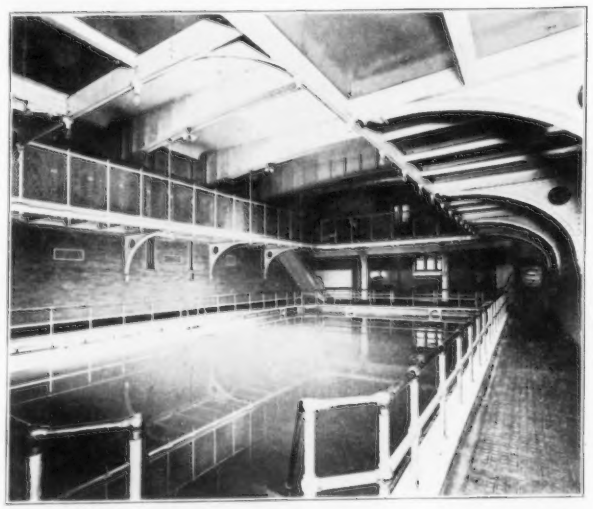
ORANGE STREET BATH, ALBANY, N. Y.

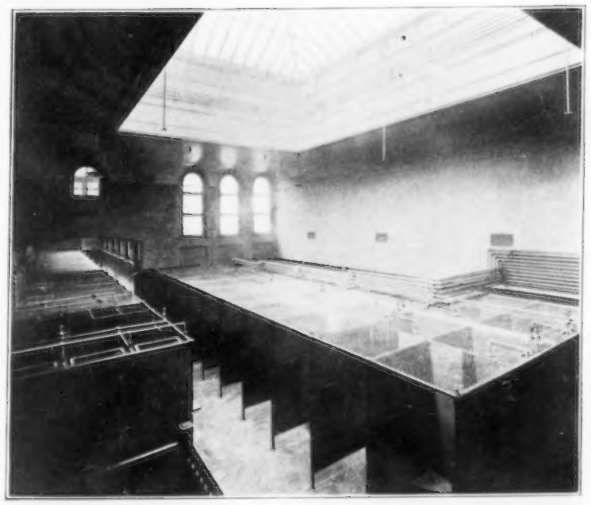












PUBLIC BATH,

WEST SIXTIETH STREET,

NEW YORK.

WERNER & WINDOLPH,

ARCHITECTS.

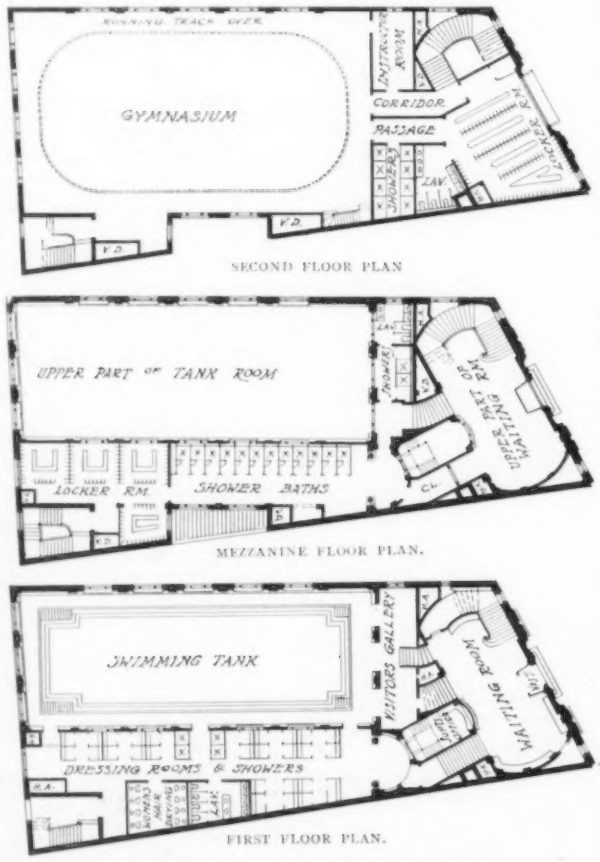
A general waiting-room gives access to the shower hall, the beginner's pool and the large pool. The plan of the plunge room also shows the use of the outside and inside gangways, the dressing compartments opening directly into both gangways. Such an arrangement allows the bathers to dispense with the form of the preliminary cleansing baths, and in the orderly town of Brookline this lack of control probably causes the superintendent no serious inconvenience, but, as a rule, this privilege would be abused and would certainly result in confusion.

The Orange Street Bath at Albany, with a pool room of similar capacity, shows that this particular difficulty has been overcome. The bather must pass through the preliminary cleansing showers before entering the pool. The plunge room, however, has the disadvantage that we noted in the Stuttgart Bath — an isolated position at the extreme end of the plot. Another serious objection is the entrance corridor providing access to both the plunge room and the shower halls.

Another example of the pool and shower type, with a considerably larger capacity, is the Cabot Street Bath, Boston (see plate 50), where bathing facilities are provided for on three floors. The general waiting room is directly off the street level, and a staircase leads to the plunge room below the level of the waiting room, another to the spectators' balcony above this level, a third to the shower hall in a mezzanine story and a fourth to the gymnasium above.

While admitting that this arrangement has the advantage of a single point of control from the main office, it certainly would not be successful during rush hours in the tenement sections of New York or other cities of the first class. The situation is further complicated by having one waiting room for both sexes, a difficulty which we have seen may be overcome by allotting special times for the sexes, but an arrangement that could scarcely be justified in a building with so large an equipment.

We have seen, in the Albany, Brookline and Philadelphia pool baths, the use of the dressing compartments directly off the pool gangway, following either the English or German principle. In this bath we have another arrangement, — the dressing compartments are provided for in a separate dressing hall, the preliminary cleansing being arranged for in shower compartments at the entrance to the plunge room.

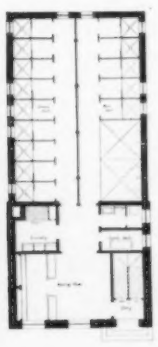


PUBLIC BATH, CABOT STREET, BOSTON.
Herbert D. Hale, Architect.

This plan has a marked advantage in separating the dressing halls from the plunge room, particularly for the sanitation and washing down of the plunge room, but it requires additional supervision in controlling the bathers while in the dressing rooms. The ratio of the pool bath to shower units in this building is about the same as in the Albany and Brookline baths, namely, four to one.

The East 23d Street Bath, New York (see plate 51), recently completed, has the advantage of a large plot, which allows all the bathing facilities on one floor.

The excessive value of the land and cost of the building will require an enormous attendance to warrant such a large outlay from the standpoint of municipal economy. This bath is the only one in the country, so far as we know, where the shower units exceed the pool units. One hundred and fifty-five compartments have been provided for shower purposes, but it seems likely that a considerable number of them must be used for preliminary cleansing purposes and dressing compartments for the pool. Access to the spectators' balcony in the plunge room is provided from a special entrance in the rear of the building.



PUBLIC BATHS, BUFFALO.

The West 60th Street Bath, New York, is still another variation of the third type. In this building, as in the Cabot Street Bath, shower and pool facilities are provided for on separate floors, but the arrangement of the pool differs considerably from the Cabot Street plan and the other baths that have been mentioned.

In this building the dressing rooms are placed on the balcony in the plunge room, directly off the waiting

room level. This arrangement separates the dressing rooms and runway from the pool runway below, and the bathers are under direct control at all times.

Staircases lead from the balcony directly into the preliminary cleansing room below, which is separated from the plunge room by a necessary guard rail. This arrangement allows the undressing, preliminary cleansing and bathing to be supervised from any point of control in the plunge room. Special staircases in the waiting rooms lead to the second-story shower halls, which have a capacity slightly less than that of the pool.

While these examples of the pool and shower bath may not in themselves express the last word in Interior Bath building, they at least show a progress which augurs well for the future.

Arrangement of Photographs and Magazine Plates.

BY SIDNEY F. KIMBALL.

THE many systems for arranging photographs and magazine plates, which have been described in THE BRICKBUILDER, all possess distinctive features of excellence, some of which, however, may seem mutually exclusive. There remains still another system which aims to combine many of these features, and may thus present some advantages over any yet suggested.

In order that it may be better understood, perhaps it will be well, before outlining it, to review briefly the general principles which govern arrangements of this sort. The kind of system adopted, as Mr. Parker pointed out in THE BRICKBUILDER for October, 1906, will depend upon the way in which one refers to one's plates. One may look either for a *special example*, such as the Riccardi Palace or the dome of St. Paul's; for any example of a *special type*, such as a post office or a theater; or for any example of some particular *detail*, such as a doorway, a balustrade, or a bronze lamp. The first two of these methods of reference are of primary importance; therefore the plates themselves will be arranged to facilitate one, or if possible, both of them. The third method is secondary. Its requirements may be satisfied either by a card catalog, in which the various interesting features of each plate are indexed, every one on a separate card, or possibly by Mr. Parker's plan for coloring the edges of the plates themselves.

Of the two primary methods, the first is generally employed in referring to buildings of the past, because in their case one usually knows just which example one wishes. Photographs of these buildings, and the few magazine plates of them which appear, may be arranged either geographically or in some other simple way. Those belonging to the Department of Architecture at Harvard University, for instance, are first divided into groups according to their architectural style — Greek, Roman, Byzantine, and so forth; then those of each style are grouped by countries; and finally those of each country are divided into towns, arranged alphabetically. The various buildings of a single town, however, are there not placed in any logical sequence, but haphazard in the order of their accession, so that with cities like Rome, Florence, or Paris, many plates must still be turned over before the desired building is found. It would seem that by placing the buildings of each town in alphabetical order an improvement in this respect might be made.

The second method of reference, for the purpose of finding any example of a special type of building, is the one most used with drawings and photographs of modern work, which serve as precedents for similar problems at the designing-table. The main bulk of these is made up of the magazine plates, tremendous in number, which are most often and perhaps most conveniently kept loose and unmounted in vertical files. The few photographs which deal with the same kind of subjects may be mounted on cards and placed with them. The obvious way to divide material of this character is into classes by type. If, however, these classes are arranged in the file alphabetically, there is the disadvantage that related heads will come far apart. Furthermore, it will be impossible to carry out this system consistently: subheads will have to be made and a mixed system will result. Thus, for example, under Residences there must be subdivisions into City, Suburban, and Country, at least. To place these subclasses, grading into one another as they do, in their separate places in the main alphabet, is hardly conceivable. They must be grouped in some way under the head of Residences. The same advantage could be gained by having other related heads side by side, as Academies, Colleges, and Technical Schools, all presenting architecturally much the same features, and each useful as a reference for the others. The logical outcome of this condition is a complete arrangement by heads and subheads, placed in some systematic order.

Such an arrangement already exists in the Dewey classification, advocated by Mr. Ginsburger in THE BRICKBUILDER for October, 1907 (q. v.), which presents many features highly worthy of adoption. Its decimal system of numbering the classes, which allows any one of them to be divided into ten smaller sections by adding another decimal place to the class-number, is especially valuable, as it makes possible unlimited expansion and interpolation. This classification, however, is one embracing all human knowledge, and unfortunately represents, in so far as it applies to magazine plates, the theoretical standpoint of a librarian rather than the practical one of an architect. Owing to limitations imposed by its general scheme, which left but four main heads available for classifying buildings, the author was forced at this point into a complete lack of coördination between the parts. There is surely less reason for grouping Commercial

Buildings and Manufactories under Public Buildings than there would be for placing Religious and especially Educational Buildings there; the first two, like most of the subheads under Public Buildings, are really coördinate with the last two, which are made main heads. The only advantage to be gained by thus cramping the headings is that in this form they take their place in a universal scheme of knowledge, and stand in their proper relation to African Ethnology and Didactic Poetry, for instance — an advantage which the architect will readily sacrifice for any practical gain in usefulness. The most logical thing for him to do is frankly to make as many main divisions as he needs.

The following, shown by experience to be useful, have been adopted as the basis of the new classification here to be described, which, while preserving the numbering system and much of the matter of the Dewey classification, attempts to overcome its deficiencies.

1. Administrative and Governmental Buildings.
2. Monuments.
3. Ecclesiastical and Religious Buildings.
4. Educational and Scientific Buildings.
5. Society Buildings
6. Residential.
7. Recreation and Amusement.
8. Business and Commercial.
9. Transportation and Storage.
10. Manufactories.
11. Bridges.
12. Other Buildings.

The arrangement of these heads, while in some degree arbitrary, has been made so far as possible with a view to easy transition from each to the next through the subdivisions, as may be seen later. Thus, Parish Houses and Sunday-School Buildings, the last section under 3, comes next in the file to Day Schools, the first under 4.

In the same way the residential clubs of 5 are followed by the apartment hotels of 6, related subjects being thus brought near together.

In splitting up the main classes the endeavor has been to keep closely to the types of actual modern work, and to subdivide only when differences in architectural character occur. In both these respects the Dewey classification is defective. To use an illustration furnished by Mr. Ginsburger himself, in the class of Ecclesiastical and Religious Buildings, the sections Temples, Mosques, and Monasteries are practically useless for modern work, while the section Y. M. C. A. would obviously, from an architect's standpoint, be much better placed with the clubs. The second fault, that of subdivisions architecturally needless, though existing to some extent in the original Dewey classification, is exemplified still more by the expansion of it published by the Experiment Station of the University of Illinois, and described in the October issue of THE BRICKBUILDER. Here, for instance, Almshouses are subdivided into National, State, County, City, Town, Endowed, Subscription, etc., though architecturally forming a single unit.

In the classification now proposed an effort has been made to minimize these defects, although doubtless many still remain. Some of these are inherent in the scheme of a decimal classification; for instance, the lack of exact coördination between certain of the heads. 1.55 Registries of Deeds is not properly a sub-division of 1.5 Court Houses; but because there are no more main heads left here, it is placed under 1.5, the one to which it is most closely related. In spite of such imperfections, the classification has stood with absolute satisfaction the test of experience with several small collections, and is now being applied, so far without meeting any difficulties, to a collection of about ten thousand plates covering the greatest variety of subjects. In full it is as follows:

1. ADMINISTRATIVE. GOVERNMENTAL. ETC.
- 1.1 Capitols. Houses of Parliament. Legislative Buildings.
- 1.2 Ministries of War, State, etc. Governmental Departments and Office Buildings.
- 1.3 City and Town Halls.
- 1.4 Custom Houses. Excise Offices.
- 1.5 Court Houses.
- 1.55 Registries of Deeds. Archive Buildings.
- 1.6 Post Offices.
- 1.63 Post Office and Custom House combined.
- 1.66 Post Office and Court House combined.
- 1.69 Post Office, Custom House, and Court House combined.
- 1.7 Engine Houses. Fire Alarm Stations.
- 1.8 Military, Protective, and Corrective.
- 1.81 Barracks, Military Post Buildings.
- 1.82 Armories. (See also 7.3, Riding Halls)
- 1.83 Arsenals.
- 1.85 Police Stations.
- 1.86 Penitentiaries. Jails.
- 1.87 Reformatories for Adults.
- 1.88 Reform Schools.
- 1.9 Hospitals. Asylums.
- 1.91 Sick and Wounded. Incurables. Etc.
- 1.92 Sanatoria.
- 1.93 Insane. Feeble Minded. Inebriates.
- 1.94 Blind. Deaf and Dumb. (See also 4.17, Day Schools for Defectives.)
- 1.95 Almshouses.
- 1.96 Aged. Convents, etc.
- 1.97 Soldiers' Homes.
- 1.98 Orphans. Children. Foundlings.

2. MONUMENTS.
- 2.1 Commemorative.
- 2.2 Funerary.
- 2.21 Monuments proper.
- 2.22 Tombs. Mausoleums.
- 2.23 Receiving Vaults.
- 2.3 etc. (Numbers left blank or omitted may be filled as occasion arises.)

3. ECCLESIASTICAL AND RELIGIOUS.
- 3.1 Chapels, small.
- 3.2 Parish Churches.
- 3.3 Cathedrals.
- 3.4 Synagogues.
- 3.5 Parish Houses. Sunday-School Buildings.

4. EDUCATIONAL AND SCIENTIFIC.
- 4.1 Day Schools.
- 4.11 Kindergartens.
- 4.12 Primary Schools.

4.13 Grammar Schools.
4.14 High Schools.
4.15 Normal Schools.
4.16 Manual Training Schools.
4.17 Schools for Defectives. (See also 1.94, Asylums for the Blind, Deaf and Dumb.)
4.2 Boarding Schools.
4.3 Colleges. Universities.
4.4 Professional and Technical Schools not connected with a University.
4.41 Theology.
4.42 Law.
4.43 Medicine.
4.44 Science, Engineering.
4.45 Art.
4.46 Music.
4.5 Independent Scientific Institutions. Laboratories. Observatories.
4.6 Scientific Museums. Menageries.
4.7 Art Museums. Galleries.
4.8 Libraries.
4.9 Learned Societies. (See also 5.11 City Clubs non-residential.)
5. Society Buildings.
5.1 City Clubs.
5.11 Non-residential. (See also 4.9 Learned Societies.)
5.115 Y. M. C. A.
5.12 Residential.
5.125 Y. M. C. A.
5.2 Suburban Clubs.
5.25 Y. M. C. A.
5.3 Country Clubs.
6. Residential.
6.1 Hotels. Etc.
6.11 City Hotels.
6.12 Country Hotels.
6.15 Restaurants. Cafés Saloons. Bars. Rathskellers.
6.2 Apartments. Tenements. (See also 8.3 Mixed Store, Office, and Apartment Buildings.)
6.3 Palaces and Palatial Private Houses. Embassies. Etc. (Detached.)
6.4 City Houses in Block. (Anything with *one* party wall or more.)
6.5 City Houses not in Block.
6.6 Suburban Houses. Village Houses.
6.7 Country Houses.
6.75 Farm Houses.
6.8 Cottages. Bungalows.
6.9 Outbuildings. Dependencies.
6.91 City.
6.911 City Stables, private.
6.912 Garages.
6.92 Country. Farm Buildings.
6.921 Gate and Porter's Lodges.
6.922 Kitchens. Laundries. Dairies. Etc.
6.923 Stables. Kennels. Etc.
6.924 Carriage Houses. Garages.
6.925 Barns. Granaries. Ice Houses. Silos. Etc.
6.926 Conservatories. Greenhouses.
6.927 Windmills. Water Towers.
7. Recreation and Amusement.
7.1 Theaters. Opera Houses.
7.2 Concert Halls. Lecture Halls.
7.3 Rinks. Amphitheaters. Riding Halls and Schools. (See also 1.82, Armories.)
7.4 Gymnasia. Turn Halls. Baseball Cages. (See also 5.115, 5.125, and 5 25, Y. M. C. A.)
7.5 Baths, swimming and otherwise. Locker Buildings.
7.6 Buildings for watering places. Beach Bath Houses.
7.7 Buildings for parks.
7.8 Boat Houses.
7.9 Stadiums. Others.
8. Business and Commercial.
8.1 Markets.
8.2 Stores, Wholesale and Retail.
8.3 Mixed Store, Office, and Apartment Buildings.
8.31 Stores and Offices.
8.32 Stores and Flats.
8.33 Offices and Flats.
8.34 Including Hall.
8.4 Office Buildings.
8.41 Low.
8.42 High, Steel Construction.
8.5 Banks. Trust Companies. Safe Deposit Vaults.
8.55 Bank and Office.
8.6 Exchanges. Boards of Trade. Clearing-houses.
9. Transportation and Storage.
9.1 Railway Passenger Stations.
9.11 Way Stations.
9.111 City.
9.112 Country.
9.12 Terminal Stations.
9.2 Street Railway Stations.
9.21 Surface Stations.
9.22 Elevated Stations.
9.23 Subway Stations.
9.3 Wharf and Dock Buildings.
9.31 Ferry Houses. Buildings for passengers. Immigrant Stations.
9.32 Dock Buildings for freight, etc.
9.4 Railway Freight Houses.
9.5 Warehouses — Bonded, Storage, etc. Cold Storage.
9.6 Grain Elevators. Coal and Ore Docks.
9.7 Railway Roundhouses. Car Barns. Etc.
9.71 Roundhouses.
9.72 Car Barns.
9.8 Signal Towers. Etc.
9.9 Others.
10. Factories. Etc.
10.1 Mill-Construction Buildings, for whatever use.
10.2 Power Stations.
10.3 Abattoirs.
10.4 Laundries.
11. Bridges.
11.1 Wood.
11.2 Masonry (stone, brick, concrete, etc.).

11.3 Steel and Iron.
11.31 Simple Truss
11.32 Cantilever.
11.33 Arch.
11.34 Suspension.
12. Other Buildings.
(To be subdivided to suit each individual collection.)

The plates are sorted into these classes, the proper numbers being marked on the corner of each; and the groups of plates are arranged in the file in numerical order, between guide-cards bearing both the number and name of the class. When there are few plates in any class its guide-card may be omitted without disadvantage; when there are none, the whole division simply drops out of the file, yet as soon as any are acquired, it is ready to spring into existence. If the guide-cards used have their tabs at different points along their top edges, those with tabs at the left may be used to separate the main groups, those next to them to separate the first decimal subdivisions, and so on. With guides so arranged any class may be found readily, even if its number is not known. If still more definite reference should be desired, an alphabetical index of all the classes might be made, so that their numbers could be found directly without searching in the table. This will ordinarily not be necessary, because even occasional use of the classification will make its main outlines familiar.

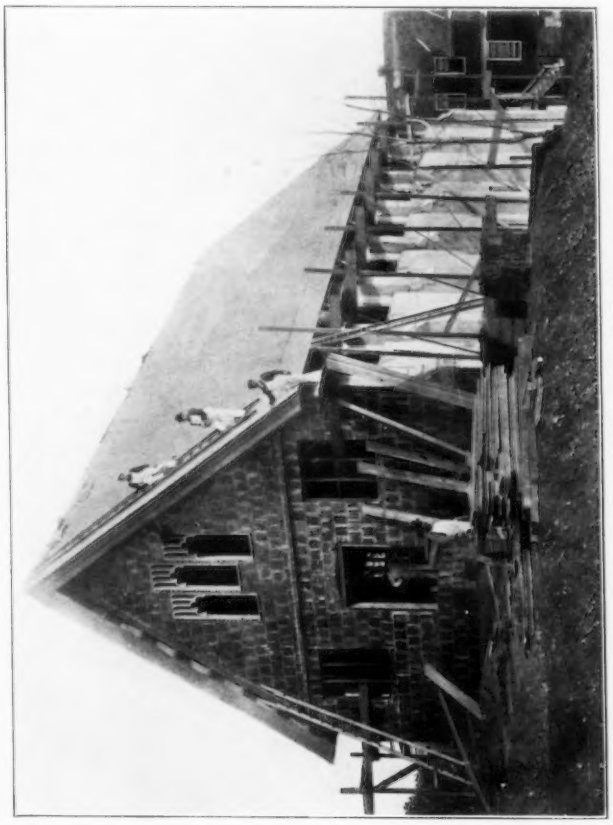
Dividing the plates simply into classes, however, will not be enough. Even if the chief purpose of the arrangement is to bring together the different types, there will often be occasions when a definite, individual example will be wanted. Many of the classes will be so large that it can be found only after long search. Moreover, if the plates are to be card-indexed for details, not only must each one be immediately accessible, but also it must have, besides its class-number, an individual number, peculiar to itself alone. For both these reasons some further arrangement, within the classes, is necessary. Mr. Parker suggests in the November, 1906, issue, that the classes by type should be subdivided by locality, construction, etc., but does not give any method for this.

The method adopted with this classification is, first, the arrangement of the buildings in each class alphabetically by the names of the cities or towns in which they stand, and then the buildings in each town alphabetically by the names of their architects. To the class number of each plate are added the first two or three letters of the name of the town, and after a dash, those of the architect's name. Thus 1.83 Har — Smi would stand for an arsenal in Hartford by Smith, and 6.7 Arl — Jon would stand for a country house in Arlington by Jones. If Jones had done two country houses there, they would be marked 6.7 Arl — Jon — A, and 6.7 Arl — Jon — B, in order to give each some distinguishing sign for purposes of reference. For the same reason the plates representing each example are divided into three groups: (1) plans, (2) elevations and sections, (3) photographs and perspectives, designated by *p*, *e*, and *f*, respectively; and the plates of each group are numbered 1, 2, 3, and so on, in the order of their accession. The second photograph would be f 2, the third plan p 3, and so forth. If there should be a plan with either an elevation or a photograph on the same plate, it is put among the plans; if there is an elevation with a photograph also, it is put among the elevations. The last two marks are placed below a line drawn under the rest. Thus the completed number of the third photograph of the second country house in Arlington by Jones would be $\frac{6.7\ \text{Arl} — \text{Jon} — \text{B}}{\text{f } 3}$. The whole system, which at first glance must appear somewhat cumbersome, is really very easy of application; so that, after a small amount of practice, the numbers can be put on as rapidly as the plates can be classified. For instance, taking some plates at random from the December Brickbuilder, it is evident that those of Mr. Atterbury's house at Ridgefield, Pls. 182, 183, 184, and 185, will be marked 6.7 Rid — Att, over f 1, f 2, f 3, and p 1, respectively; whereas that of Peabody & Stearns's High School at Whitinsville, Pl. 186, will be marked $\frac{4.14\ \text{Whi} — \text{Pea}}{\text{p } 1}$. A practical illustration of the utility of the system was recently given when an architect, being away in the country and desiring certain plates, was able to write home their numbers, making them up on the spot, and have the office boy pick them out. With any arbitrary numbering system, such as that proposed by Mr. Kelsey, such a thing would have been impossible.

In one or two cases it has been thought desirable, for various reasons, to make slightly different arrangements within the classes. The sections for hospitals and asylums, colleges, and similar institutions are first divided, as usual, by the name of the city or town where they are, but institutions in the same place are then lettered serially A, B, C, etc., and their separate buildings numbered 1, 2, 3, etc. In this way, confusion caused by multiplicity of names is avoided, and the division of institutional buildings in the same city is made on the institutional lines, not on the lines of architectural authorship. The advantage of this is evident in a city like New York, where Columbia University and New York University (which, one largely, the other entirely, built by Mr. McKim, would otherwise be confused) are readily given the numbers 4.3 N — A and 4.3 N — B. Again, in the case of ecclesiastical and religious buildings, a general division into Gothic and not-Gothic is first made, even before the subheads are put in. The parts are designated by *g* and *c*, and then divided as usual. A Gothic parish church would be 3. g 2; a Gothic cathedral, 3. g 3; a cathedral in the Renaissance style, 3. c 3. Other minor rules and variations might be described, but they will readily suggest themselves to the reader as he meets their problems individually.

With the plates numbered and arranged according to the proposed system, all of the three methods of reference are equally possible. Not only are all the examples of each type brought together, but also any special example is instantly available, and the whole collection may be card-indexed, so that reference is instant and sure.

WITH PLASTER FINISH. HOUSE AT OAKMONT, PA. CARPENTER & CROCKER, ARCHITECTS. IN COURSE OF CONSTRUCTION.



WITH PLASTER FINISH. CHURCH AT WEST ORANGE, N. J. H. B. UPJOHN, ARCHITECT. IN COURSE OF CONSTRUCTION.

EXAMPLES OF TERRA COTTA HOLLOW TILE CONSTRUCTION.

IN COURSE OF CONSTRUCTION.

HOUSE AT MT. KISCO, N. Y. Delano & Aldrich, Architects

IN COURSE OF CONSTRUCTION.

LODGE AT ENGLEWOOD, N. J. Dunham Wheeler, Architect.

HOUSE AT ENGLEWOOD, N. J. Dunham Wheeler, Architect.

HOUSE AT UPPER MONTCLAIR, N. J. D. S. Van Antwerp, Architect.

EXAMPLES OF TERRA COTTA HOLLOW TILE CONSTRUCTION.

Editorial Comment and Selected Miscellany

THE fire at Chelsea, Mass., which began at about 10.30 A. M., Sunday, April 12, and continued until midnight, destroying some ten million dollars' worth of property, furnishes little by way of suggestion in matters pertaining to building construction which is not already pretty thoroughly known.

This city, of some twenty-five thousand inhabitants, adjoins Boston on the north and has been ruled for a long period by a succession of the ordinary type of politicians who have been wholly lacking in administrative capacity, with the result that intelligent and progressive municipal thought and action have become unknown quantities. The city was built up almost entirely of wood, with now and then a business block, schoolhouse and church of brick or stone, but these offered little resistance to the flames, which were driven before a forty-mile gale. Not a single building in the whole city was of fireproof construction, although 'tis worthy of note that the façade of the Odd Fellows Building, which was entirely of architectural terra cotta, stands alone amid the ruins without having been appreciably damaged. Burning shingles were driven by the wind to the shingle or gravel and tar roofs of other buildings a mile or more distant, with the result that every building within the fire-swept area, which is about two and one-half miles long by one mile wide, is in ruins. But who thinks that Chelsea will be rebuilt without shingle and tar paper roofs, or with proper regard for safe construction? The insurance money which will come to the mortgage holders on many of these homes will be received with gratitude, and the owner with his small equity will be glad to find shelter under any sort of roof. Will the officials of the city of Chelsea demand of property owners a better type of construction? Will the city, in the rebuilding of its own, set an example worthy of emulation? Will the insurance companies who will stand two-thirds of the burden of this loss-by-fire-calamity take a hand in remedying existing evils? Let us see.

DETAIL BY F. C. BROWNE, ARCHITECT.
NEW YORK ARCHITECTURAL TERRA COTTA CO., MAKERS.

What happened to Chelsea could, probably would, under similar conditions, happen to almost any other small city or town in the United States.

FOUNTAIN IN PALM ROOM, STATLER HOTEL, BUFFALO, N. Y.
Executed in Faience by Atlantic Terra Cotta Company.
Esenwein & Johnson, Architects.

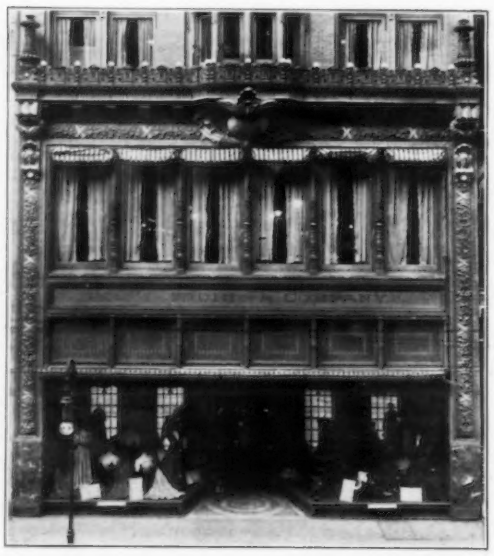
THE disastrous fires with loss of life at Pottstown, Pa., and Collinwood, Ohio, prove the necessity of greater vigilance with regard to buildings in which many persons gather in suburbs and small towns. Not only the construction but maintenance should be watched. If this is difficult of realization within the organizations of cities, how can it be attained over a large area sparsely dotted with small places? State inspection has been shown to be lax. The spectacle of an officer settling himself into a snug berth of inspectorship does not suggest the vigilance necessary to cope with potential danger; and we are reminded of Governor Hughes's recently expressed dictum that the need to-day is not in new laws but of character in the men called upon to administer the law. Long before political machinery can be attuned to its duty, we suspect that private enterprise as embodied in the insurance business will have organized its own method of inspection. The cost of this must be added to the premiums, but the result will be a safeguarding of life, also of the interests of stockholders in the insurance companies.

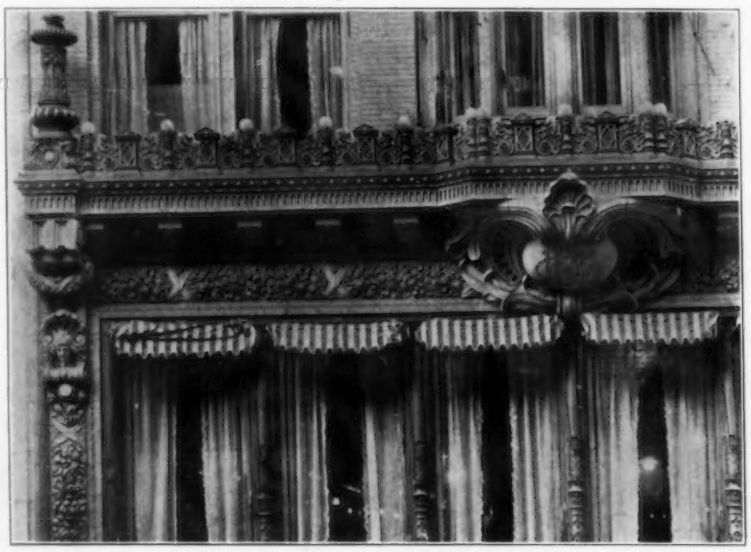
THE USE OF TERRA COTTA HOLLOW TILE BLOCKS IN THE CONSTRUCTION OF HOUSES.

ON pages 83 and 84 of this issue there is presented a series of illustrations of

houses which have been built of terra cotta hollow tile blocks. These examples of this type of construction are given with the sole object of indicating the development of a new type of building construction which is being adopted pretty generally by architects throughout the country. At this stage in the development of the science of building it is important that a type of construction which is economical in all respects, and which lends itself easily to the demands of a free architectural treatment, and which is dependable in the matters of strength, weather and fireproof qualities, should receive the close scrutiny of those who are looked to to solve the problem of rational building.

The illustrations are given merely to show the character of the work in which this construction is now being employed but there is no limit to the types of buildings in which it may be used successfully, as the material lends itself easily to all forms in design and construction. It is unnecessary to here enter into the discussion of comparative costs, details of construction for walls and floors, strength of the hollow tile blocks, sizes, shapes, etc., for this is all given in detail in a very interesting treatise upon the subject which has recently been issued in booklet form by the National Fire-Proofing Company. A copy of this booklet may be had upon application to any of the offices of the company. It is a work which presents in a most direct way all the data concerning this particular type of construction and we are glad to commend it to those of our readers who are interested.





A STORE FRONT, CINCINNATI.
Frank M. Andrews, Architect.
Treated in colored faience, including a rich combination of red tones.
Work executed by Rookwood Pottery Company.

DETAIL BY WILLIAM E. MOWBRAY, ARCHITECT.
New Jersey Terra Cotta Co., Makers.

HERCULEAN ARCH AND PHŒNIX WALL BLOCKS.

THE above is the title of another interesting treatise on the use of terra-cotta hollow tile blocks in floor and wall construction which has recently been issued by Henry Maurer & Son. The work is amply illustrated from drawings, showing wall, floor and partition construction and photographs of many buildings in which these systems have been employed.

It is desirable that the walls of a house should be fireproof but it is imperative that they shall be damp proof, and the fact that hollow tile blocks are being used so extensively to-day in the walls of houses and other buildings is evidence that they are fully meeting these demands. Hollow tile block construction is no fad, and its increased use warrants a close study of the systems which are being put forth by concerns which have held the respect of the building fraternity for more than a generation.

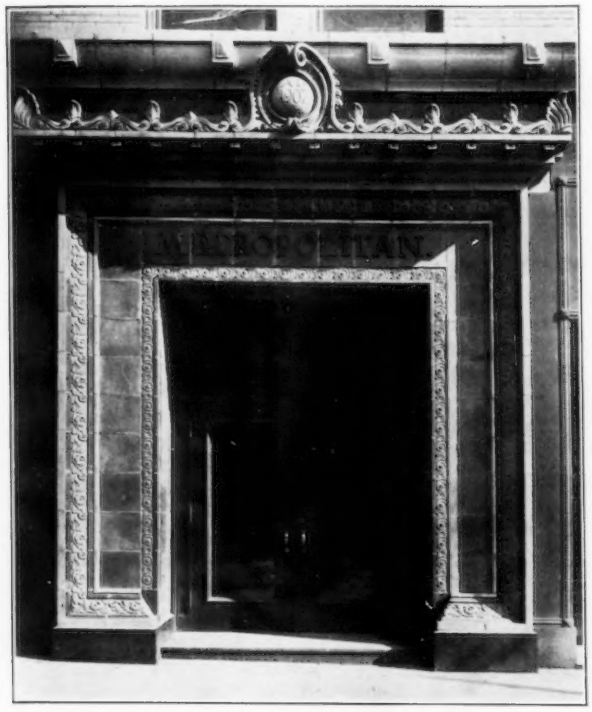
ACKNOWLEDGMENT.

IN the book entitled "Fireproof Houses of Terra Cotta Hollow Tile and How to build Them," recently issued by the National Fire-Proofing Company, there were illustrated two buildings with details of structural work, at Briarcliff, N. Y., by Robert W. Gardner, architect. Through an oversight Mr. Gardner's name was omitted in connection with the illustrations. The National Fire-Proofing Company wishes in this manner to make amends as far as possible for their oversight.

IN GENERAL.

New York will build permanent state fair buildings at Syracuse at a cost approximating a million and a half dollars.

DETAIL BY CHAPPELLE & BOSWORTH, ARCHITECTS.
South Amboy Terra Cotta Co., Makers.



ENTRANCE TO METROPOLITAN BUILDING, ST. LOUIS.
Mauran, Russell & Garden, Architects.
Treated in green, yellow and brown dull finish faience.
Made by Hartford Faience Company.

Richard Hooker and Howard K. Jones have been admitted to the firm of Alden & Harlow, architects, Pittsburg.

The date of the next Convention of the Architectural League of America has been set for September 17, 18 and 19 at Detroit, to be held under the auspices of the Detroit Architectural Club.

SCHOOLHOUSE, SOUTH BEND, IND.
George W. Selby, Architect.
Built of Hydraulic-Press Brick.

Architect Grosvenor Atterbury has been commissioned to design a building in Philadelphia for the Henry Phipps Institute for the Study, Treatment and Prevention of Tuberculosis.

The Marist Brothers, a French Catholic order, is preparing to erect buildings for a Catholic college on two hundred acres of land recently purchased near Lowell, Mass.

The Board of Trustees of the University of Illinois has accepted plans for two new buildings. One is a physics laboratory to cost about two hundred and fifty thousand dollars, the other, an extension of the natural history building, to cost about one hundred and fifty thousand dollars.

KEY BLOCK, Y. M. C. A. BUILDING,
PATERSON, N. J.
Brick Terra Cotta and Tile Co., Makers.

The venerable Fifth Avenue Hotel is now closed to patrons. In quickly destroying the building, the celebrated old hostelry will at least be spared a period of melancholy senility. A "sky-scraper" office building is to be erected on the site.

Messrs. McKim, Mead & White have been selected as architects for the new New York Post Office Building, which is to be located near the new terminal of the Pennsylvania Railroad, for which they are also the architects.

SELLWOOD BUILDING, DULUTH, MINN.
William A. Hunt, Architect.
Built of dark gray standard brick, made by Columbus Brick and Terra Cotta Company.

ORNAMENT OVER NINTH-STORY WINDOWS, MONTELEONE HOTEL, NEW ORLEANS.
Toledano & Wogan, Architects.
Northwestern Terra Cotta Co., Makers.

The first prize of $5,000 for the best set of plans submitted for the proposed $300,000 Capitol building of San Juan, Porto Rico, has been awarded to Frank Edson Perkins, architect, formerly of Boston, but now of New York. Ritchie Abbott of New York received the second prize of $2,000 and H. L. Beadel of New York the third prize of $1,500. There were 135 competitors.

On March 28, the Columbus Society of Architects was organized at Columbus, Ohio, with a charter membership of forty-one practicing architects. The object of the society is for the advancement of interest in architecture and the allied arts, the professional improvement of its members, and to bring into social relations those interested in these objects. President, A. M. Allen; Vice-President, C. A. Stribling; Secretary-Treasurer, Fred W. Elliott; Directors, Frank L. Packard, C. E. Richards, Edwin E. Pruitt, C. E. Bellows.

PUBLIC BATHS, CLEVELAND.
E. H. Beier, Architect.
Roofed with Ludowici-Celadon Tile.

The terra cotta used in the Normal and Latin School Group, Boston, illustrated in THE BRICKBUILDER for March, was supplied by the Atlantic Terra Cotta Co.

Edward W. Robinson, vice-president of the Hartford Faience Co., has opened an office at 1123 Broadway, New York, and will take personal charge of the sales department of that Company. Mr. Robinson also represents Sherwin & Cotton and Carter & Company of England, well-known manufacturers of high-grade wall and floor tiles.

Carter, Black & Ayers of New York are introducing into the market a vitrified hollow building block. Being salt-glazed they are exceptionally well adapted to withstand dampness and for foundation work. Both sides of the blocks are scored so that stucco when applied holds firmly. These blocks are suitable for houses, garages, manufacturing buildings and the like.

The New Jersey Terra Cotta Company is supplying the architectural terra cotta for the following new buildings: Apartment house, Park Avenue, New York, C. W. Buckham, architect; apartment house, Riverside Drive, New York, H. C. Pelton, architect; apartment house, Madison Avenue, New York, W. E. Mowbray, architect; Seaman's Home, West Street, New York, Boring & Tilton, architects; Soldiers' Home, Chelsea, Mass., Clough & Wardner, architects; Town Hall, Skowhegan, Me., H. C. and J. H. Stevens, architects; Lincoln School, Orange, N. J., W. M. Tubby, architect.

POSITION WANTED—Young man 22 years of age, five years' practical architectural experience, desires position as traveling representative, preferably in New England, for some article in the building line. Moderate salary. Address "Salesman," care of THE BRICKBUILDER.

POSITION WANTED—Architect, 28, University graduate, experienced in practical office work and superintendence, returning from foreign travel and study, wishes permanent engagement, with future prospects as superintendent of construction, practical business manager or representative with architect or construction company. Address "University Graduate," care THE BRICKBUILDER.

SCHOOL OF ARCHITECTURE
UNIVERSITY OF PENNSYLVANIA

The Four Year Course. Full professional training (with an option in Architectural Engineering) leading to the degree of B. S. in Architecture. Advanced standing is offered to college graduates or the two degrees of A. B. and B. S. in Architecture can be taken in six years.

The Graduate Year affords opportunity for advanced work in design and other subjects of the course leading to the degree of M. S., in Architecture.

The Two Year Special Course. For qualified draughtsmen. Offers advanced technical training with a Certificate of Proficiency.

For Full Information address Dr. J. H. Penniman, Dean of the College University of Pennsylvania, Philadelphia.

KIDDER'S ARCHITECTS' *and* BUILDERS' POCKET-BOOK
FIFTEENTH EDITION, REVISED

The changes in this edition consist of the correction of all typographical errors reported to the publishers, and the rewriting of Chapters XXIII and XXIV. This work has been done by Rudolph P. Miller. Professor Alvah H. Sabin has also brought the section on Paints and Varnishes up to date.

16 mo, xix + 1703 pages, 1000 figures

Morocco, $5.00

NEW YORK: JOHN WILEY & SONS

A VALUABLE REFERENCE BOOK

"American Competitions," 1907

(*The "Concours Publique" of the U. S.*)

E. B. LACEY, Editor

7 Competitions:

Soldiers' Memorial, Allegheny County, Pa.	10 sets of Drawings, 24 Plates
D. L. & W. R. R. Station, Scranton, Pa.	6 sets of Drawings, 18 Plates
Union Theological Seminary, New York City	6 sets of Drawings, 19 Plates
State Educational Building, Albany, N. Y.	10 sets of Drawings, 33 Plates
Bureau of American Republics' Bldg., Wash., D. C.	9 sets of Drawings, 35 Plates
Connecticut State Library and Supreme Court Building, Hartford, Conn.	4 sets of Drawings, 19 Plates
Central Y. M. C. A., Philadelphia, Pa.	4 sets of Drawings, 14 Plates

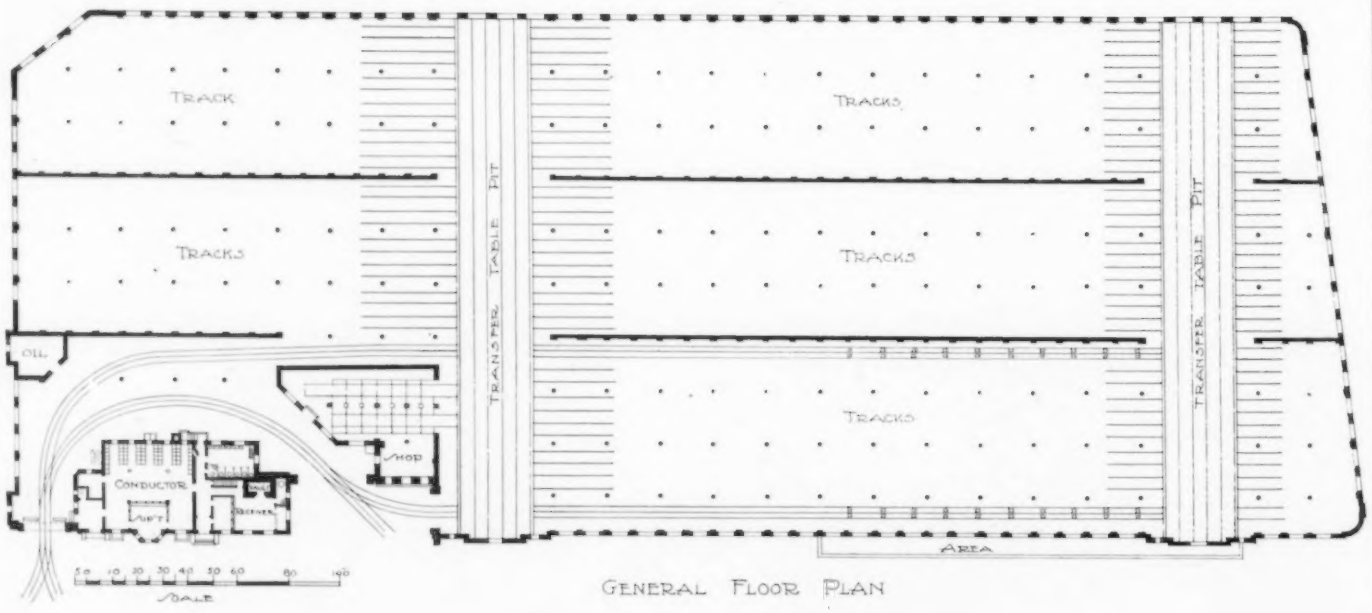
Published by the
T SQUARE CLUB, PHILADELPHIA

Edition limited, 750 copies. Price, substantially bound in buckram, $13.50; in portfolio, $11.00. Cash with order.

M. A. VINSON, *Manager of sales for T Square Club*

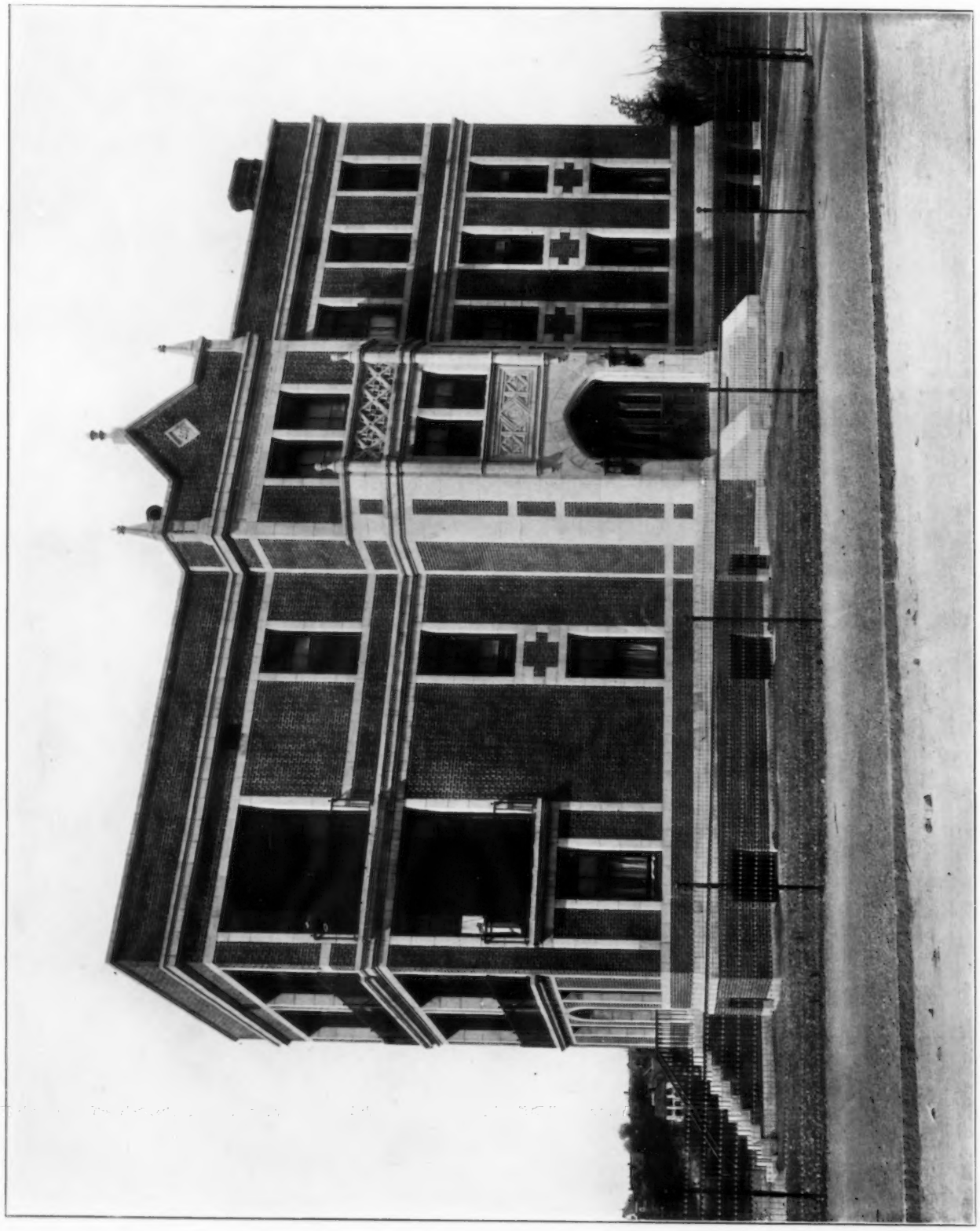
1012 Walnut St. PHILADELPHIA or 205-206 Caxton Bldg. CLEVELAND, O.

CAR BARNS FOR CAPITAL TRACTION COMPANY, WASHINGTON, D. C.
WOOD, DONN & DEMING, ARCHITECTS.



GENERAL FLOOR PLAN

CAR BARNS FOR CAPITAL TRACTION COMPANY, WASHINGTON, D. C.
WOOD, DONN & DEMING, ARCHITECTS.



VINCENT MEMORIAL HOSPITAL, HEATH STREET, BOSTON.
CHARLES BRUEN PERKINS, ARCHITECT.

· SECOND FLOOR PLAN ·
SCALE

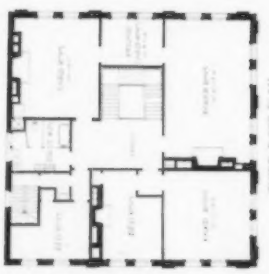
THIRD FLOOR PLAN
SCALE

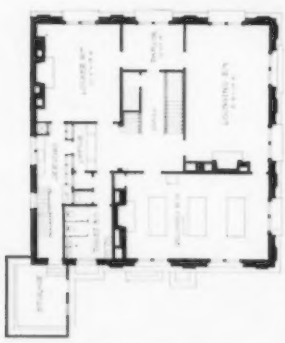
· BASEMENT PLAN ·
SCALE

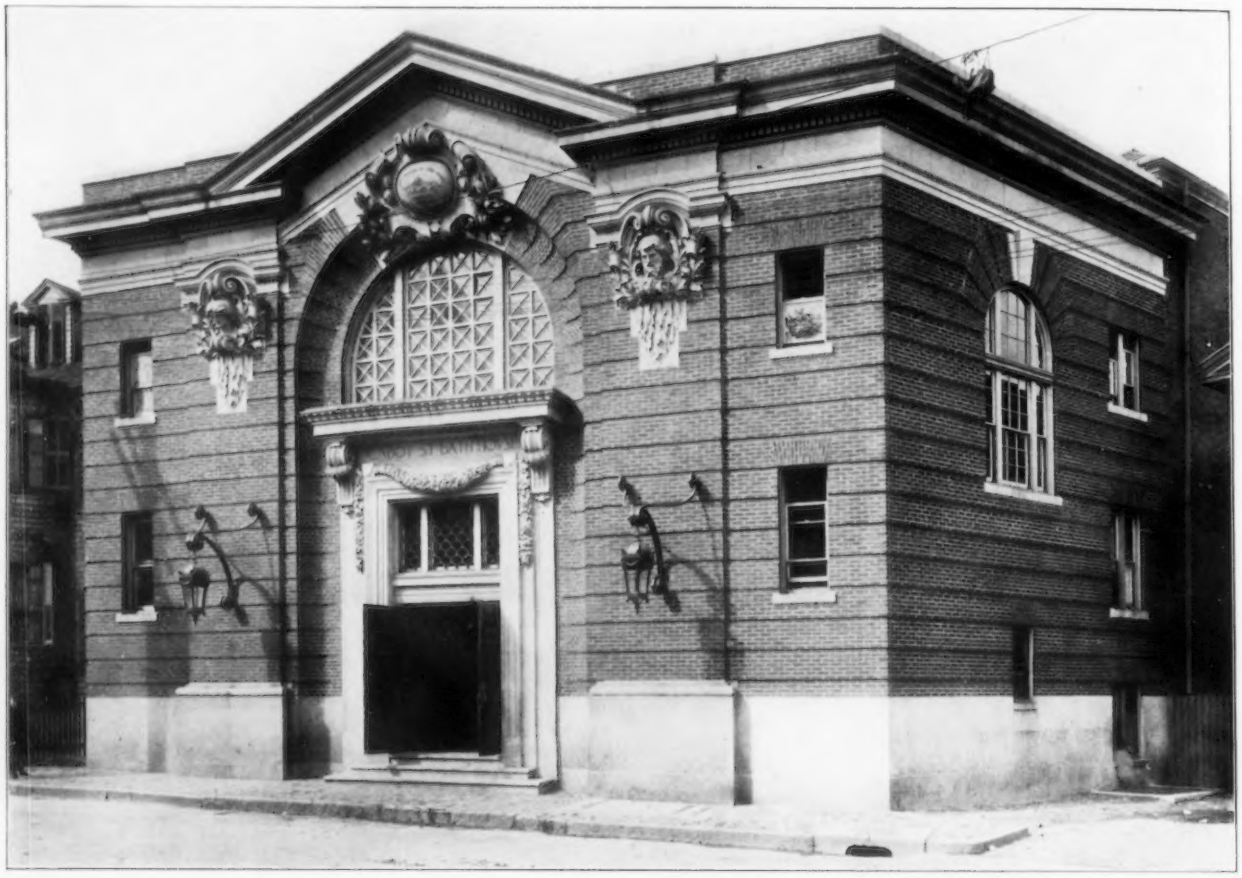
· FIRST FLOOR PLAN ·
SCALE

VINCENT MEMORIAL HOSPITAL. HEATH STREET, BOSTON
CHARLES BRUEN PERKINS, ARCHITECT.

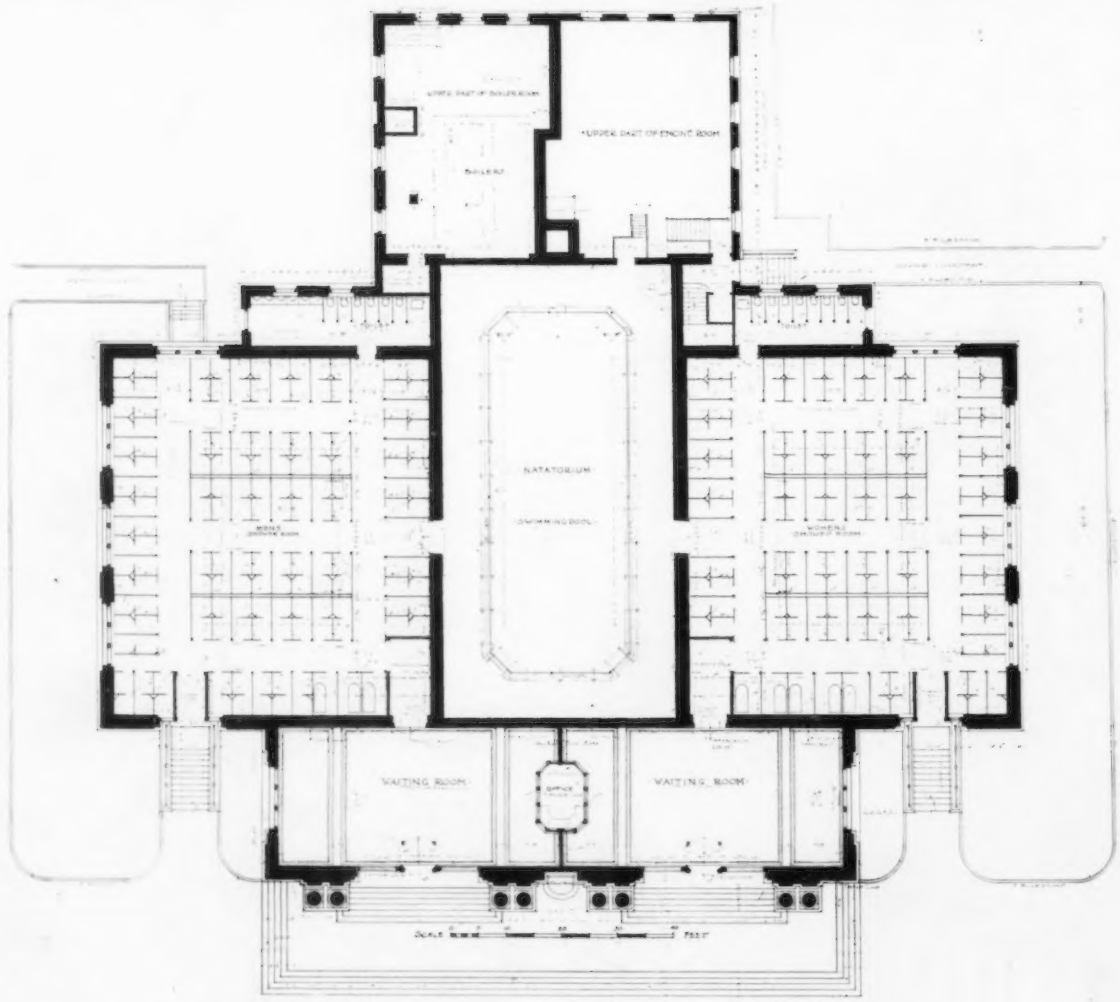
TARRATINE CLUB, BANGOR ME.
PARKER, THOMAS & RICE, ARCHITECTS.







PUBLIC BATHS, CABOT STREET, BOSTON.
HERBERT D. HALE, ARCHITECT.

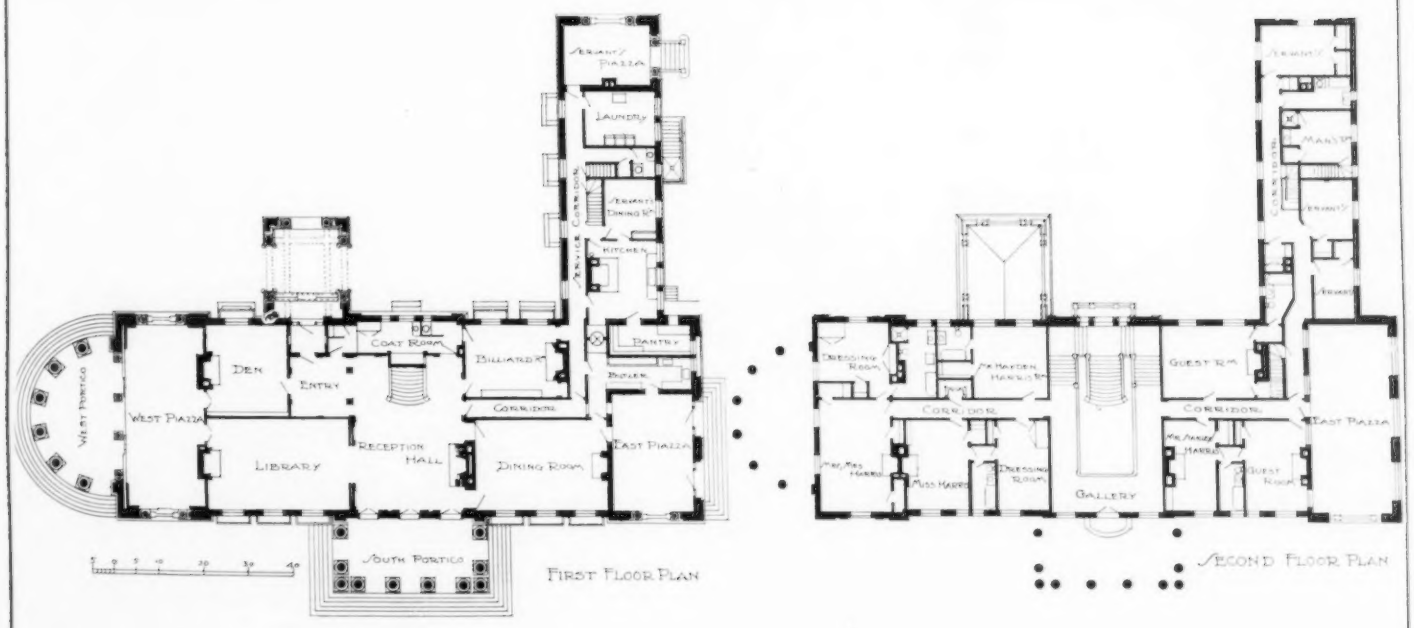


PUBLIC BATHS, EAST TWENTY-THIRD STREET, NEW YORK

WILLIAM MARTIN AIKEN AND ARNOLD W. BRUNNER, ARCHITECTS.

HOUSE FOR N. W. HARRIS, ESQ., LAKE GENEVA, WIS.

SHEPLEY, RUTAN & COOLIDGE, ARCHITECTS.

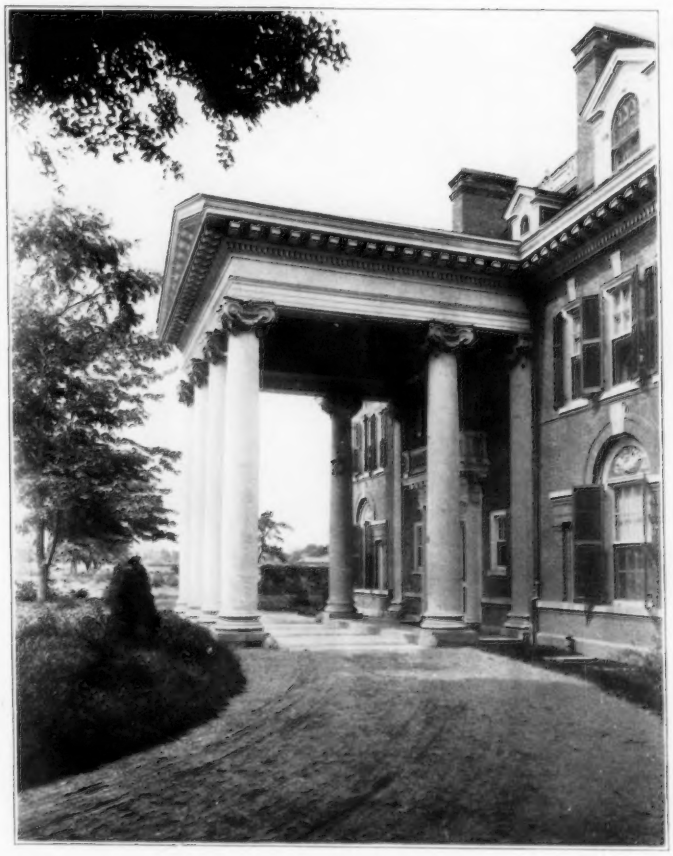


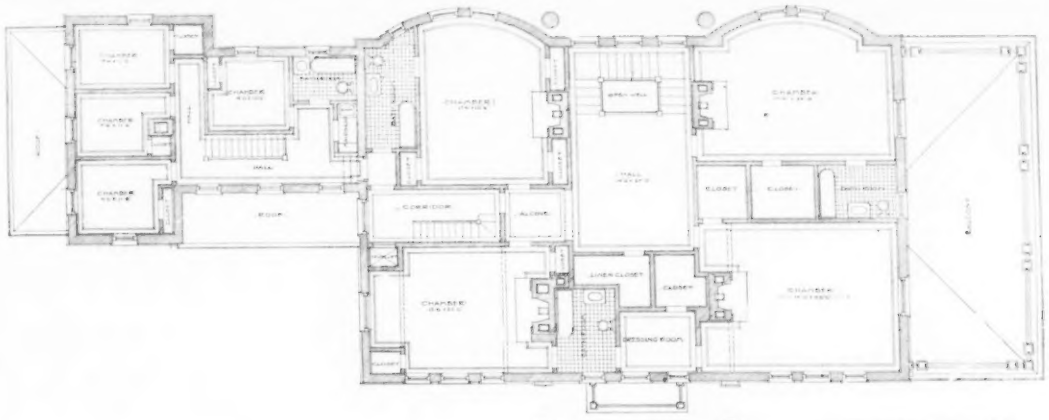
STABLE AND PLANS OF HOUSE FOR N. W. HARRIS, ESQ., LAKE GENEVA, WIS.

SHEPLEY, RUTAN & COOLIDGE, ARCHITECTS.

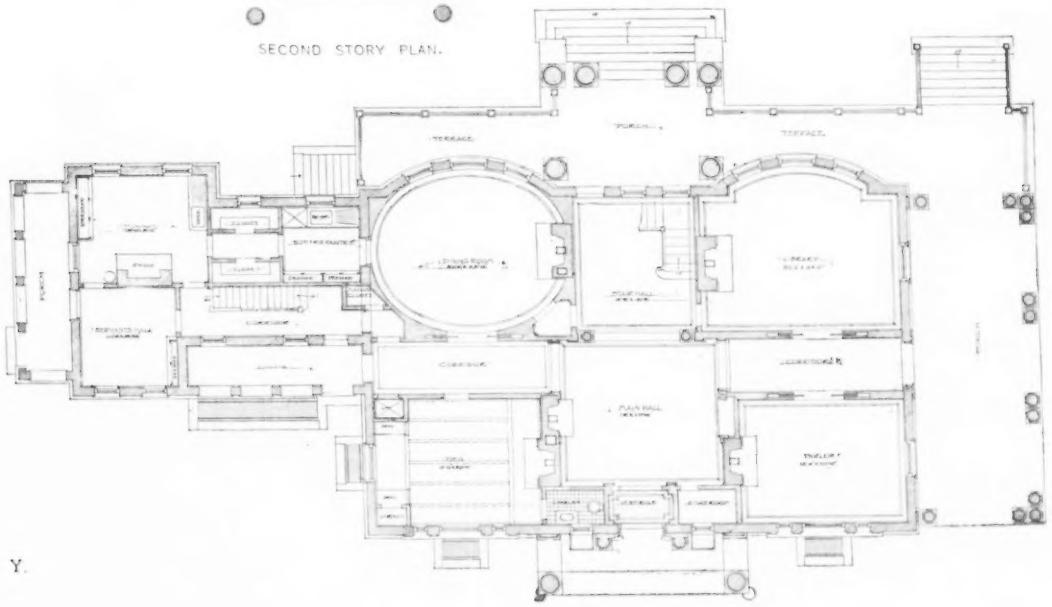
HOUSE AT MAMARONECK, N. Y.

WILLIAM A BORING, ARCHITECT





SECOND STORY PLAN.



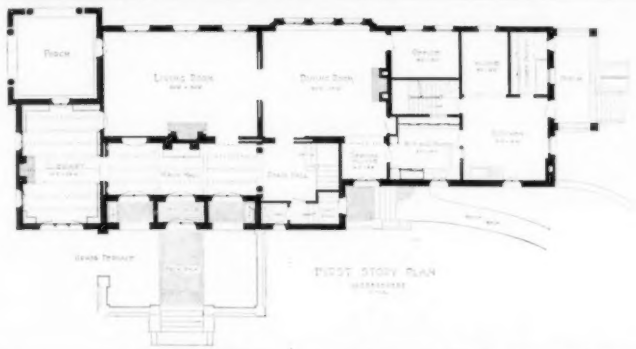
FIRST STORY PLAN.

HOUSE AT
MAMARONECK, N. Y.
WILLIAM A. BORING,
ARCHITECT.

THE STABLE.

HOUSE AT IRVINGTON-ON-HUDSON, N. Y.

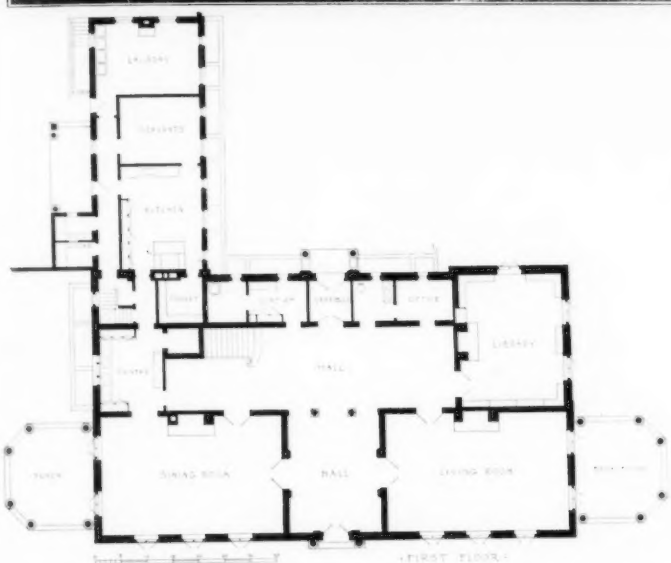
A. S. BELL, ARCHITECT.

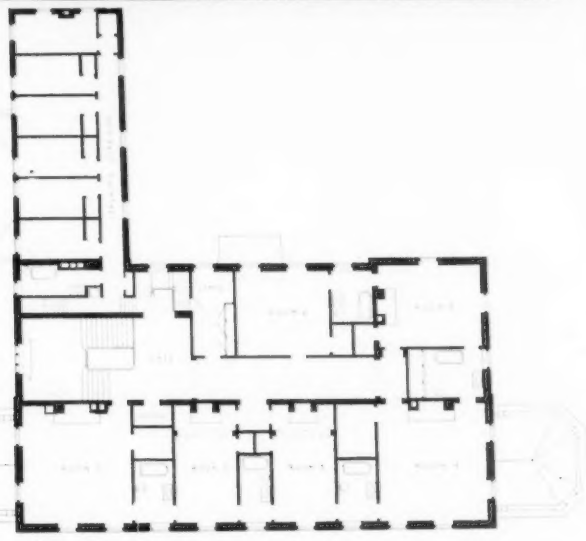


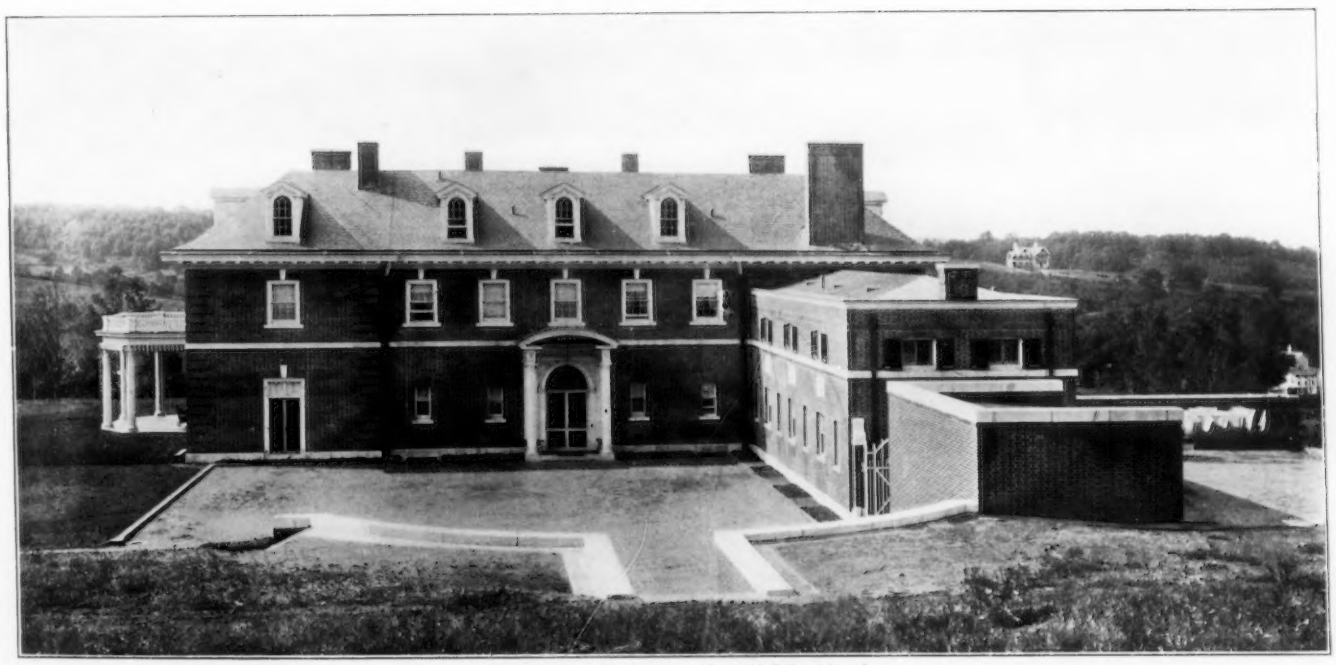
HOUSE AT CINCINNATI, OHIO.

JAMES GAMBLE ROGERS, ARCHITECT.

(OF HALE & ROGERS.)







HOUSE AT MOUNT KISCO, N. Y.

DELANO & ALDRICH, ARCHITECTS.